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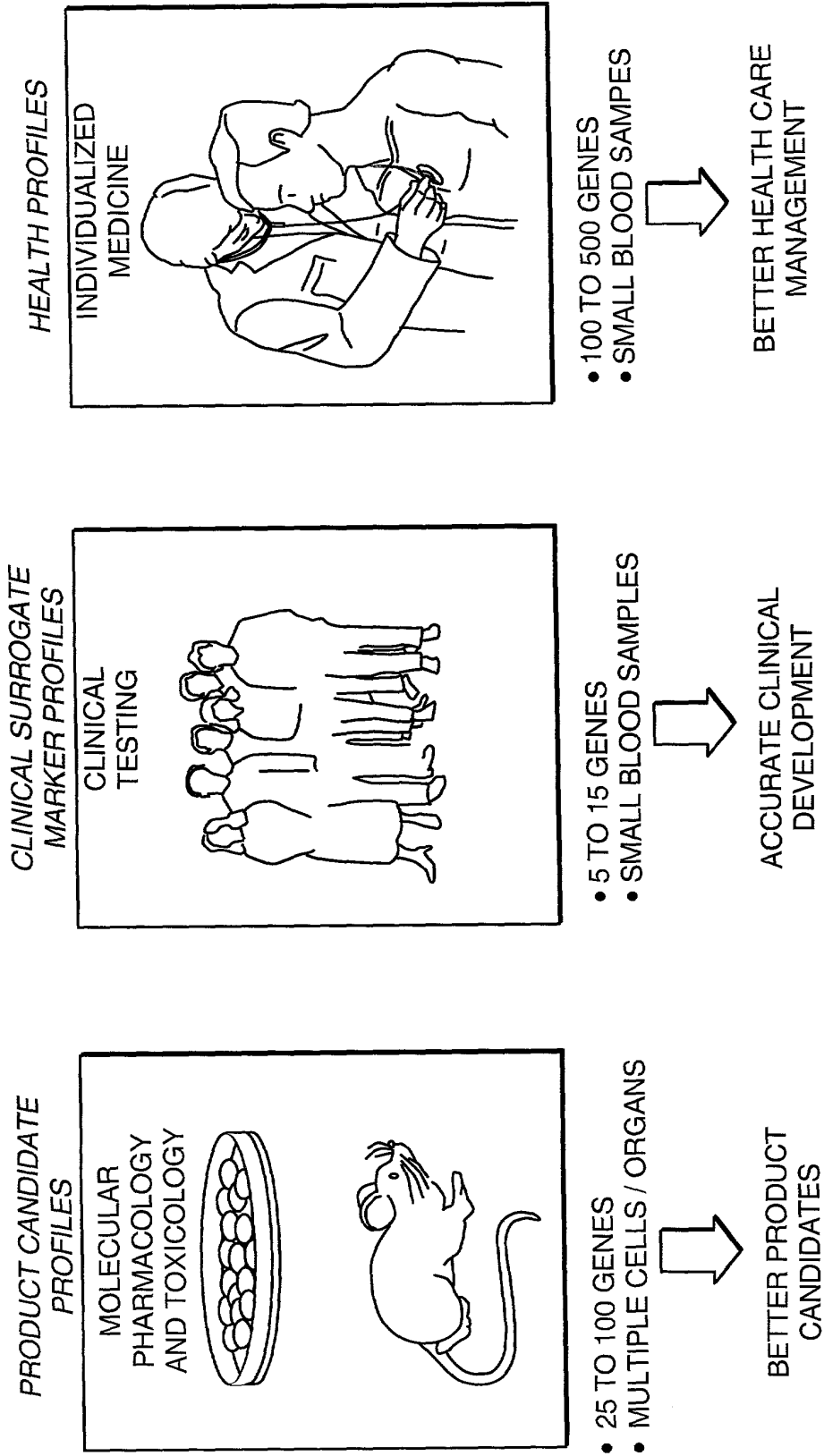
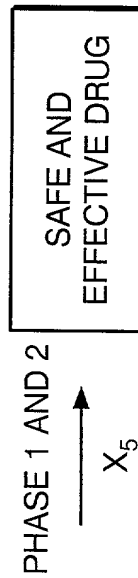


FIG. 1



## X<sub>4</sub>= IN VIVO GENE PROFILING

$X_5 =$  SURROGATE MARKER

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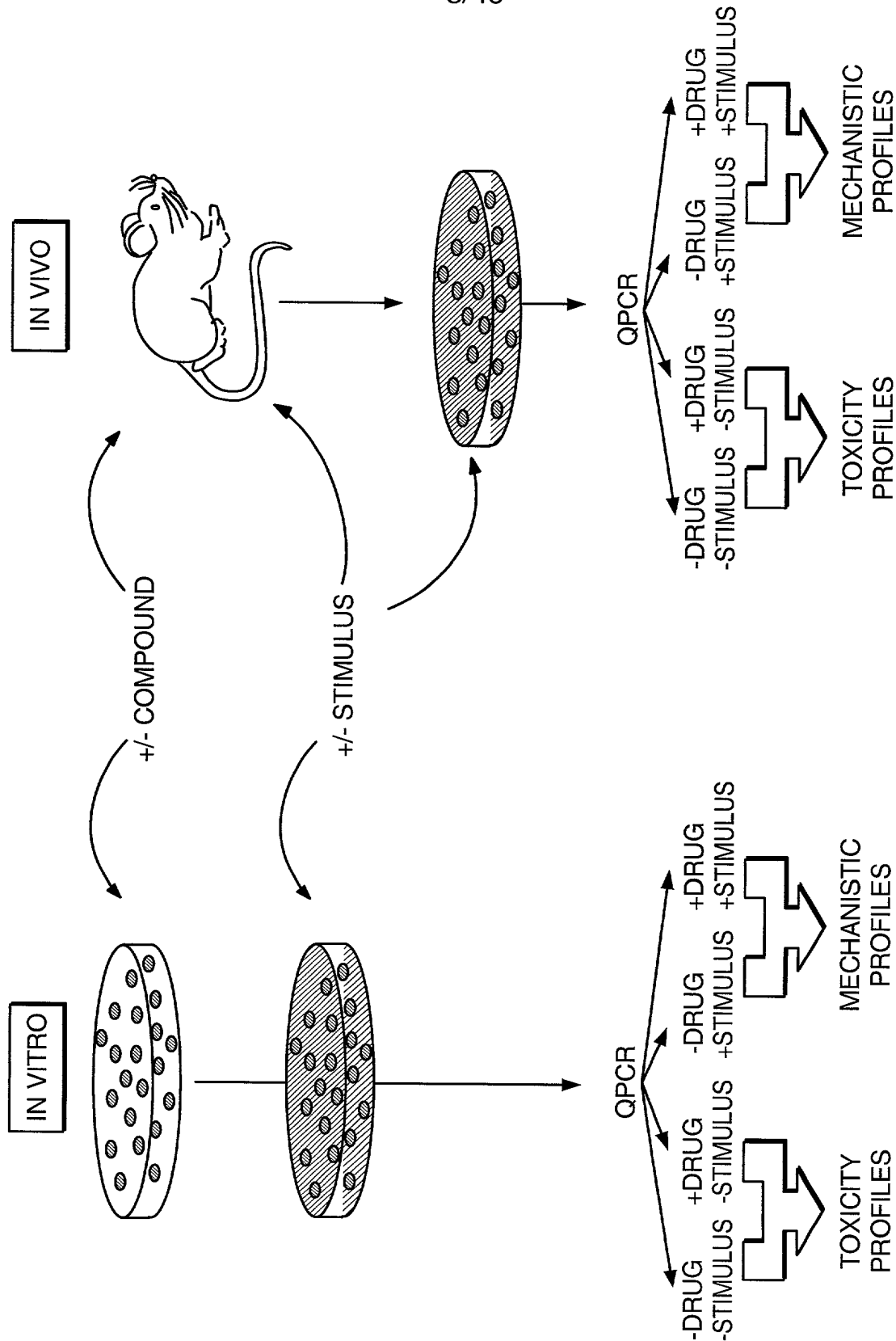


FIG. 3

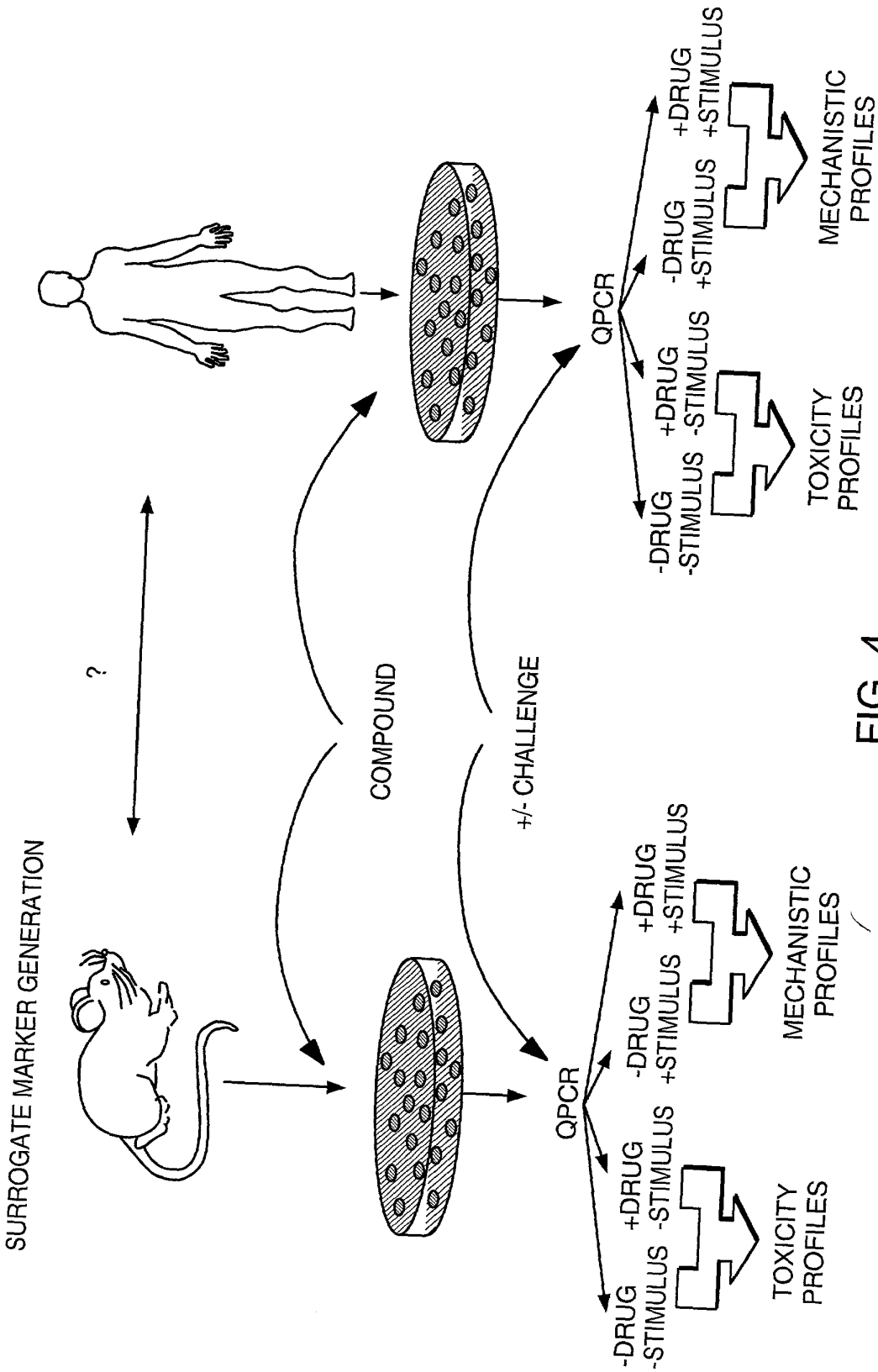


FIG. 4

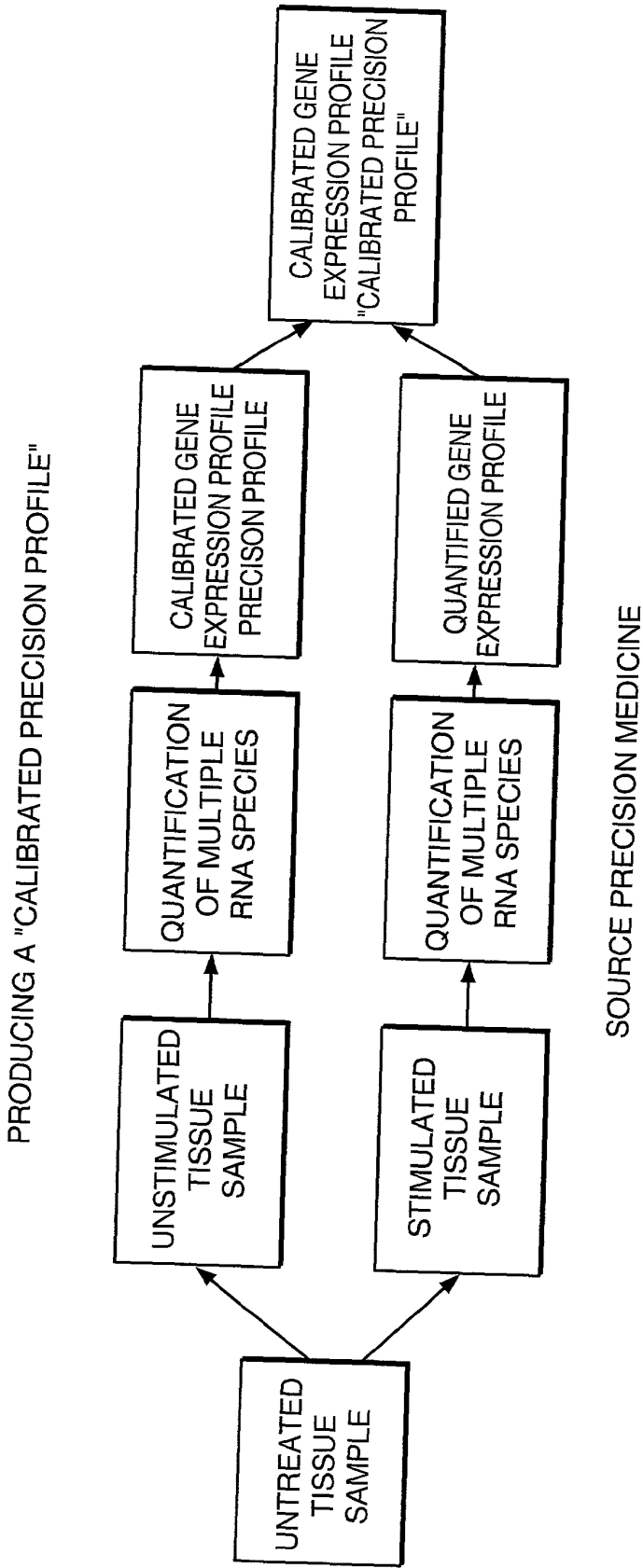


FIG. 5

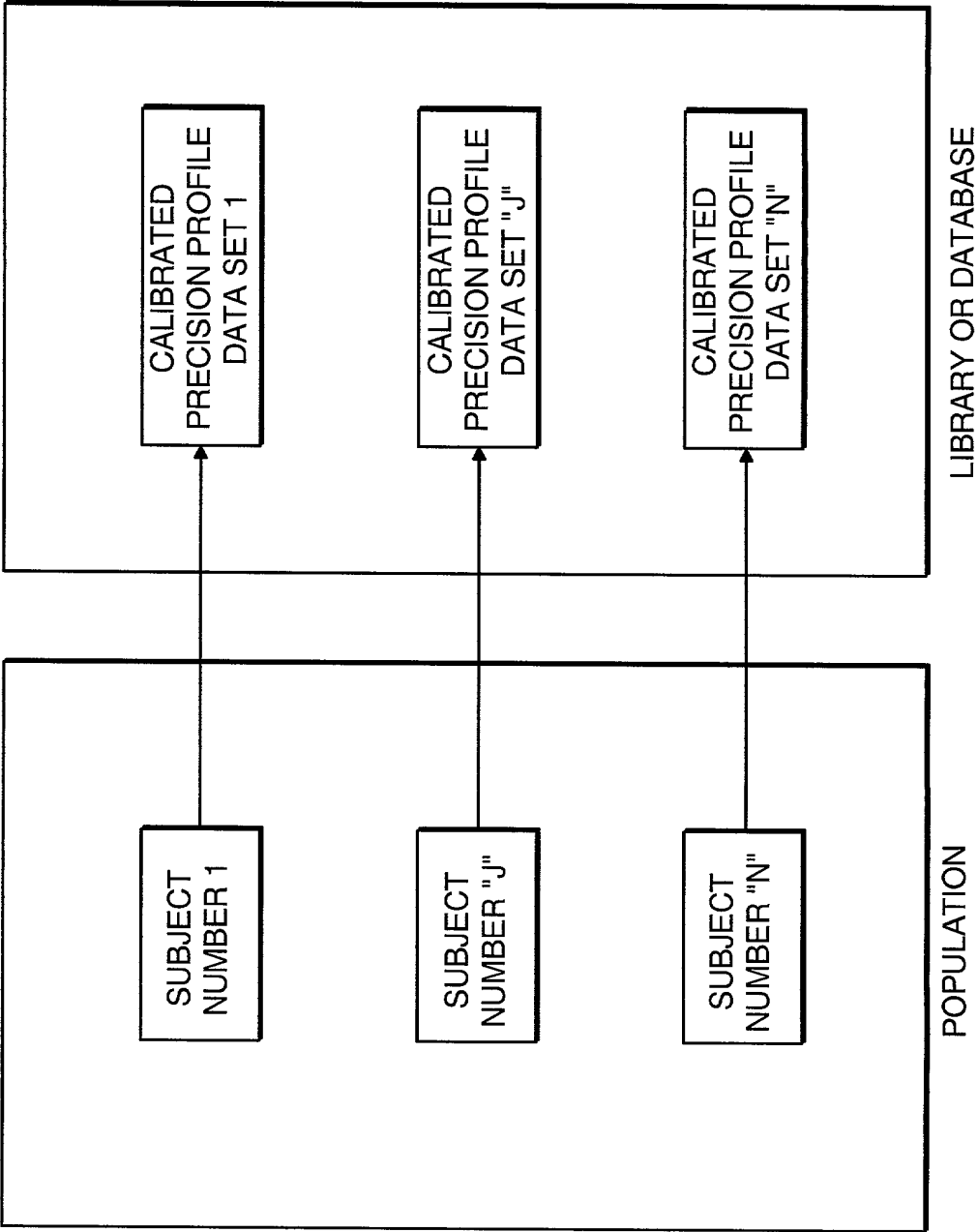
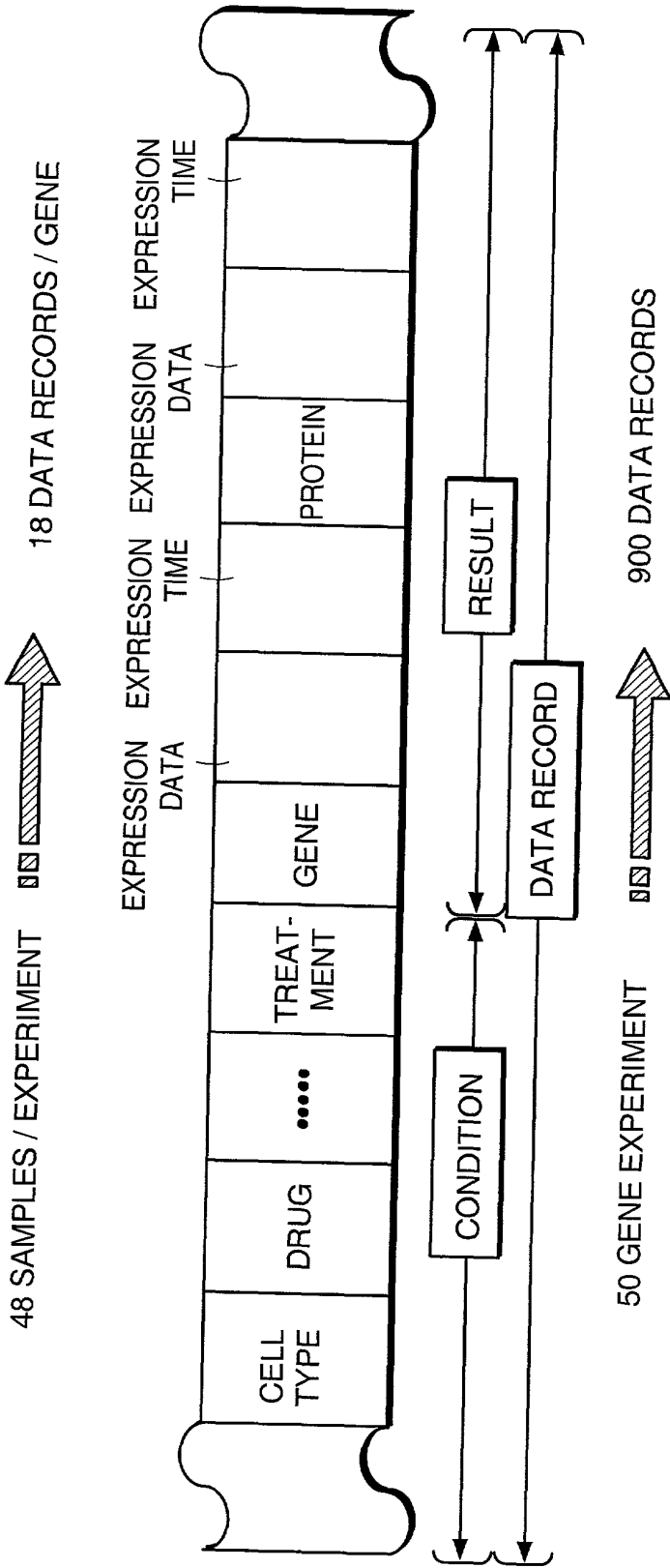


FIG. 6



EACH NEW RECORD IMPROVES THE PREDICTIVE POWER OF THE DATABASE AND INCREASES ITS VALUE

FIG. 7

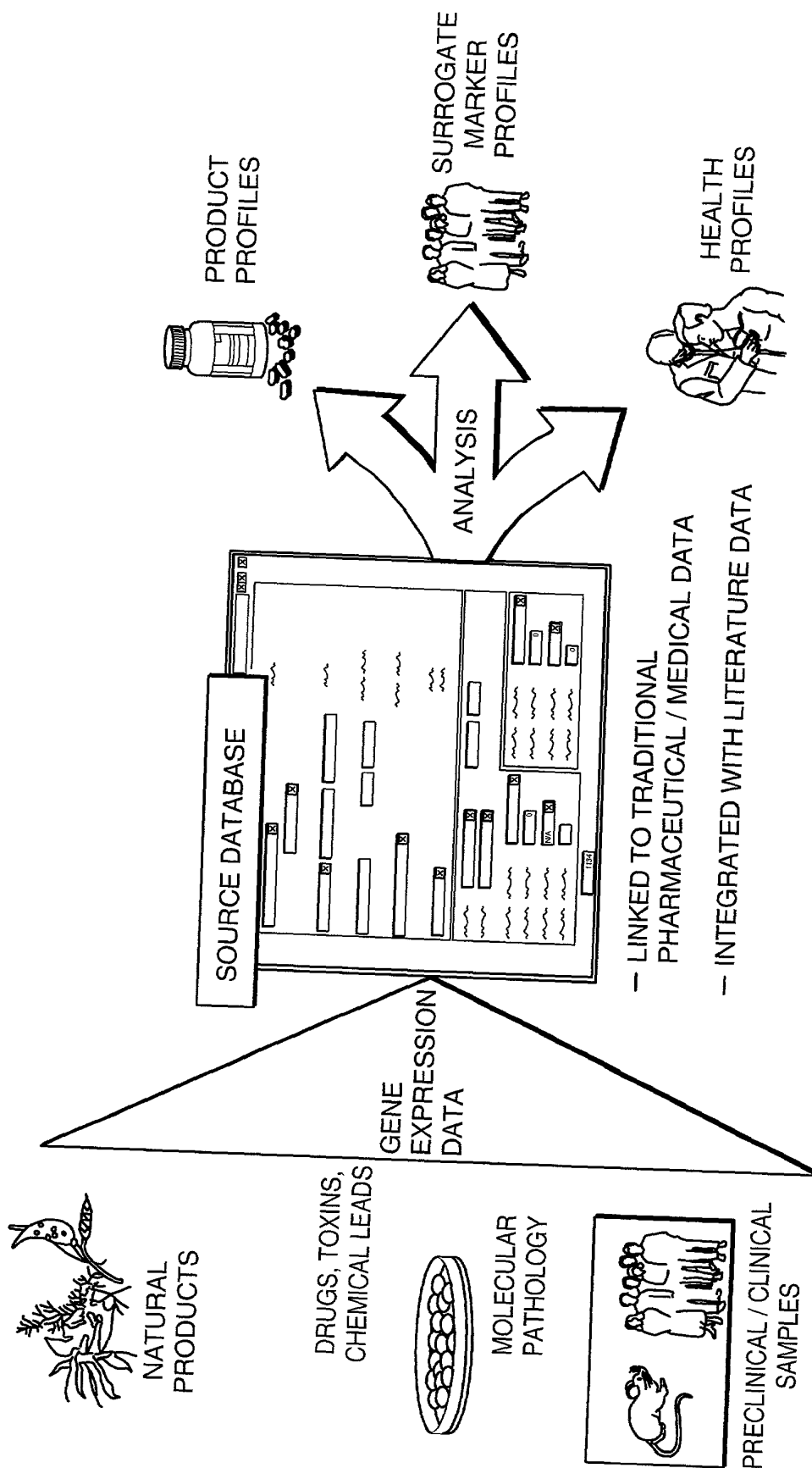


FIG. 8



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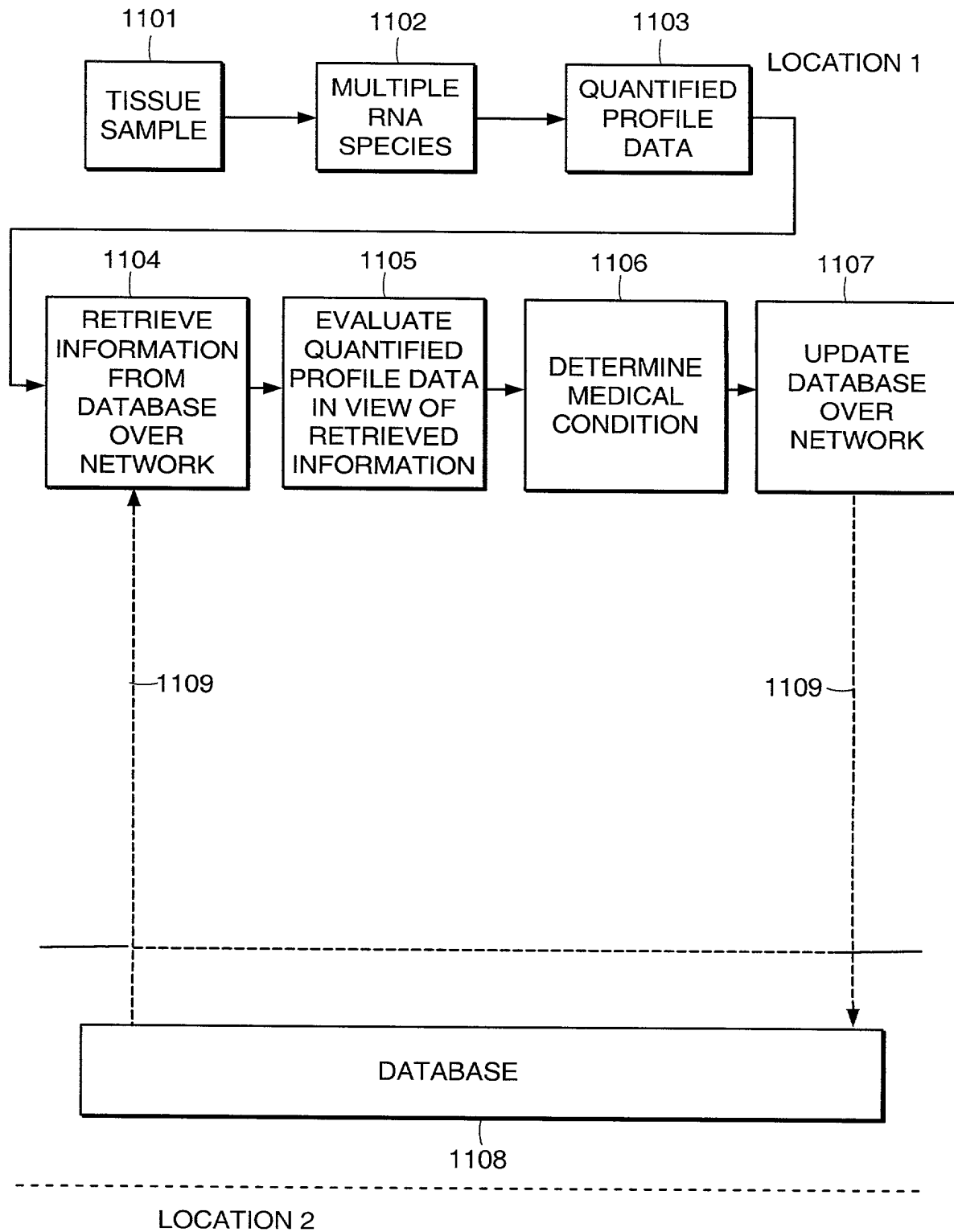


FIG. 9

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# PHASE TWO CLINICAL TRIAL DESIGN USING PRECISION PROFILING

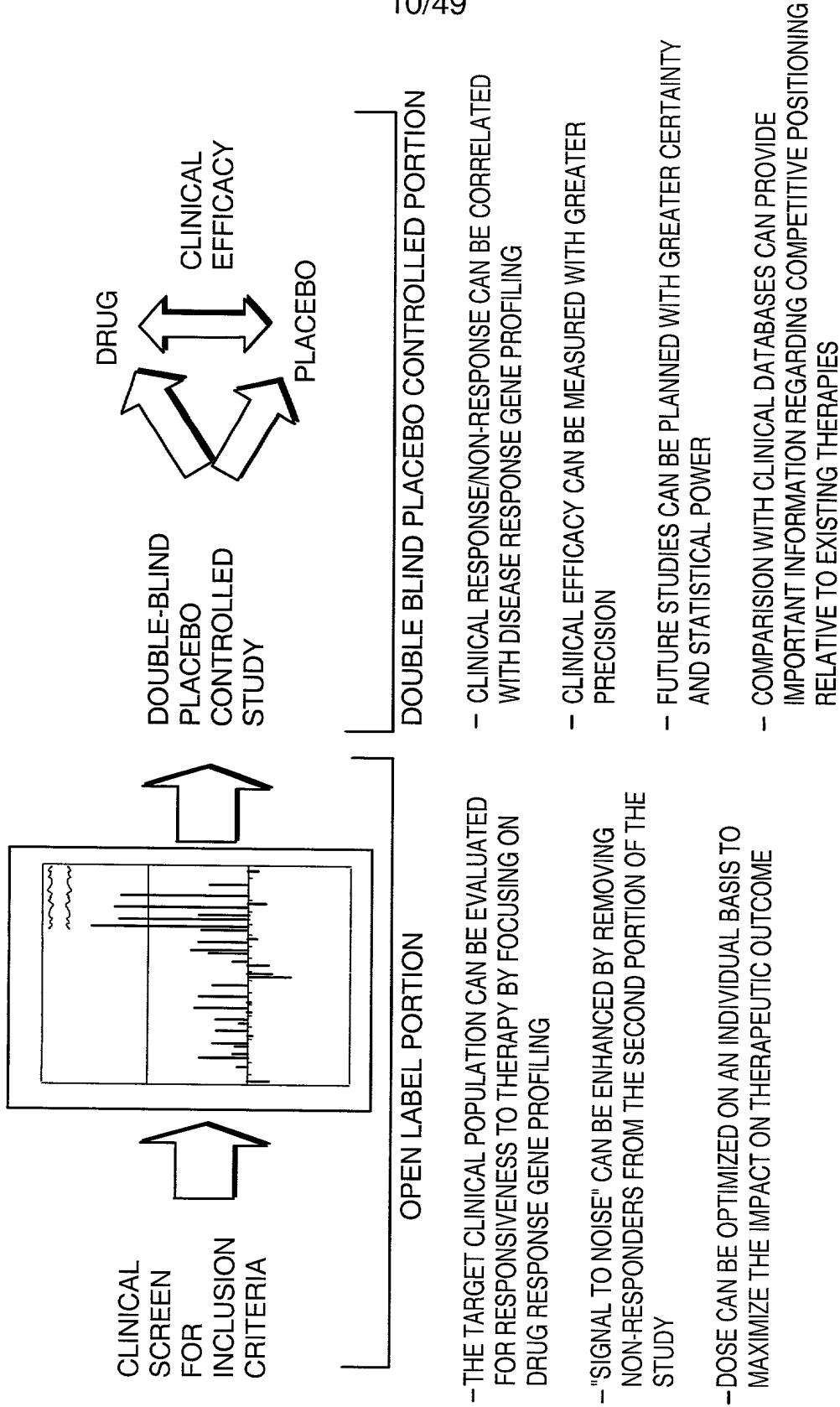


FIG. 10a

FIG. 10b

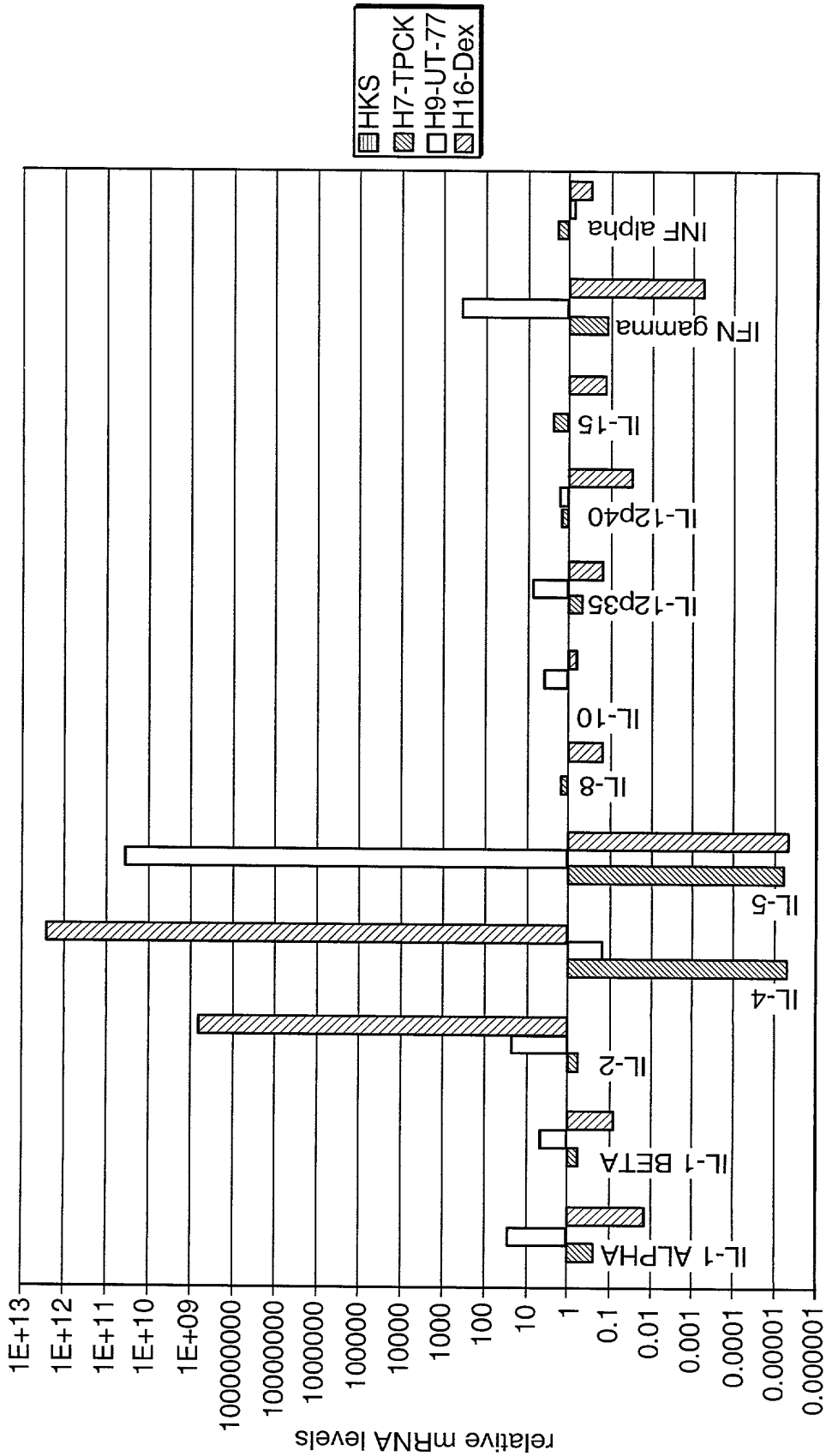


FIG. 11a

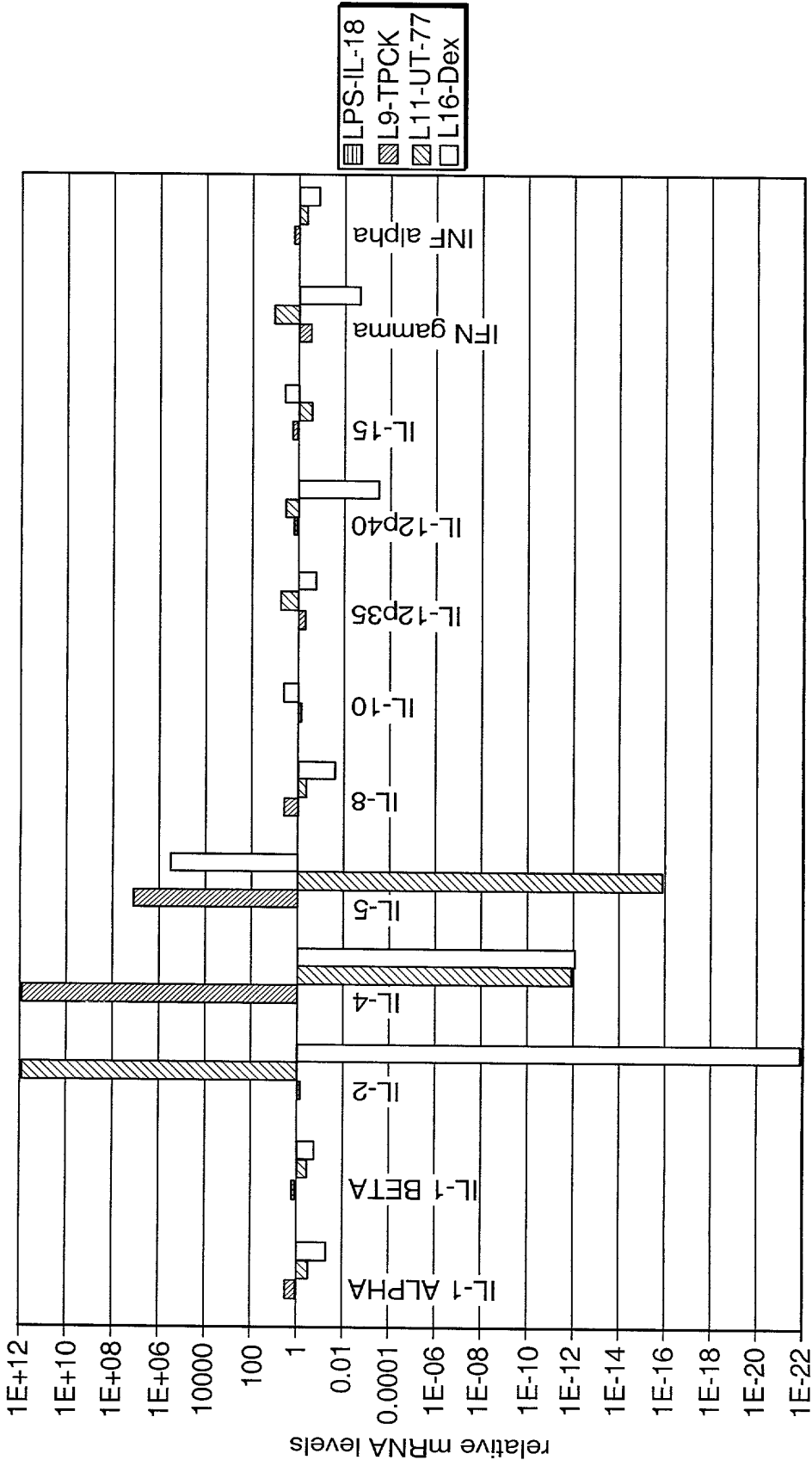


FIG. 11b

COMPARATIVE DRUG PROFILING SHOWS DIFFERENCES AMONG ANTI-  
INFLAMMATORY DRUGS WITH DIFFERENT MECHANISM OF ACTION

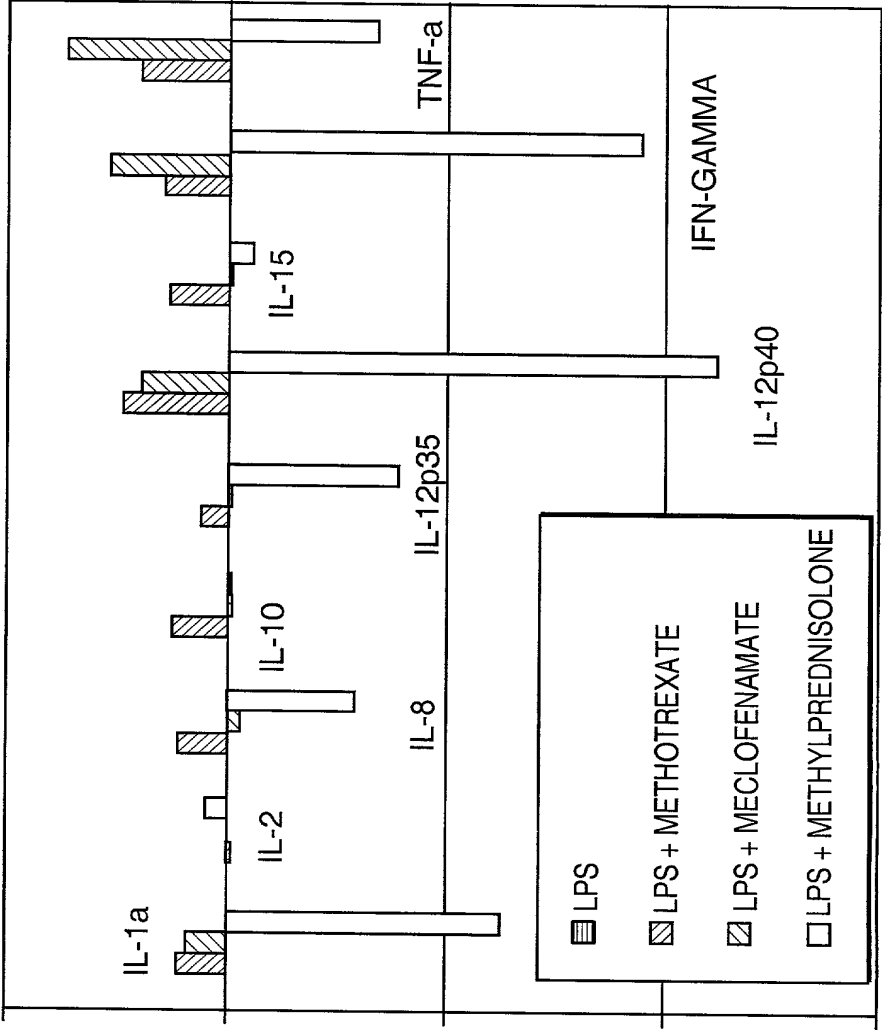


FIG. 12a

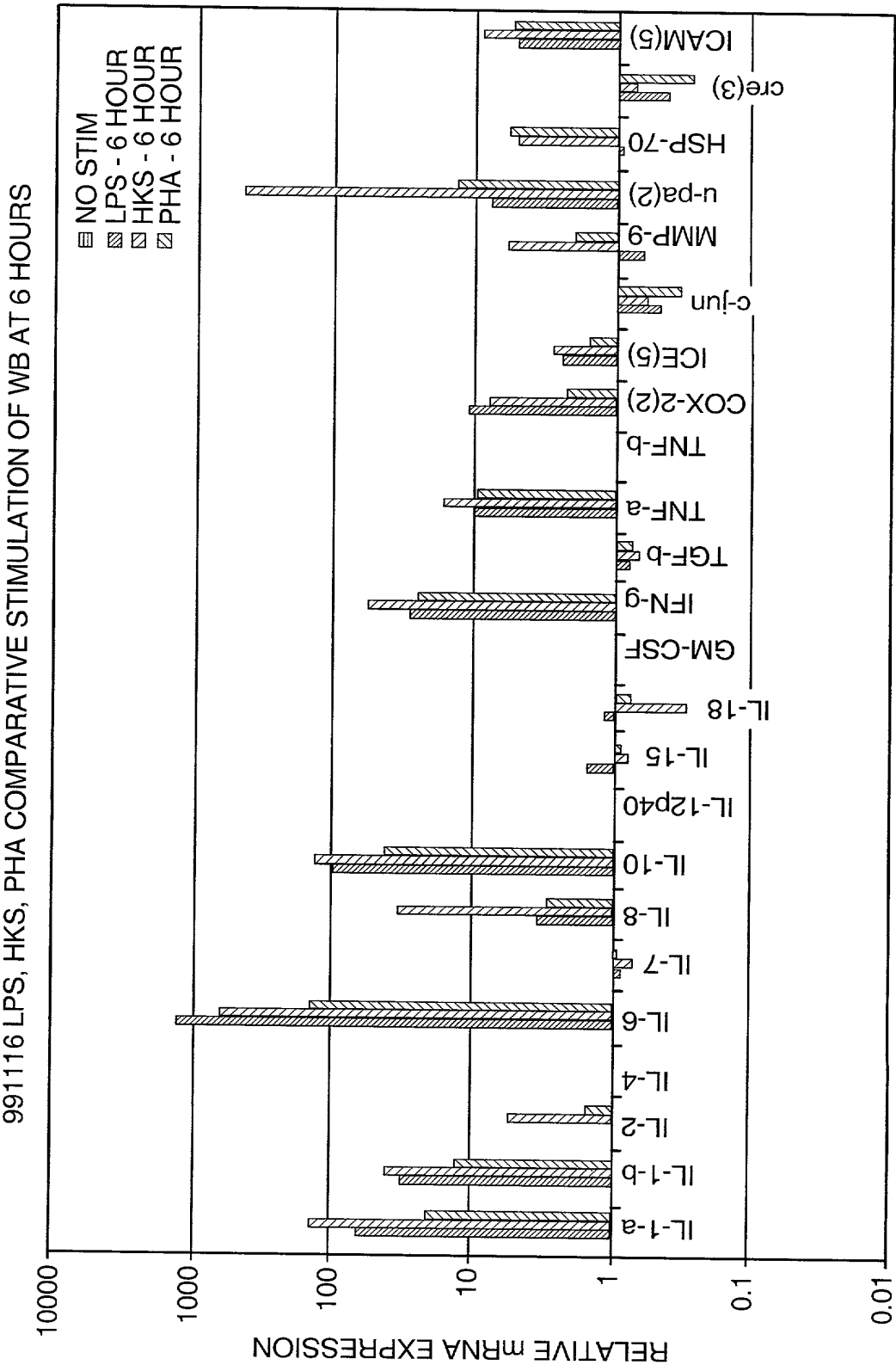
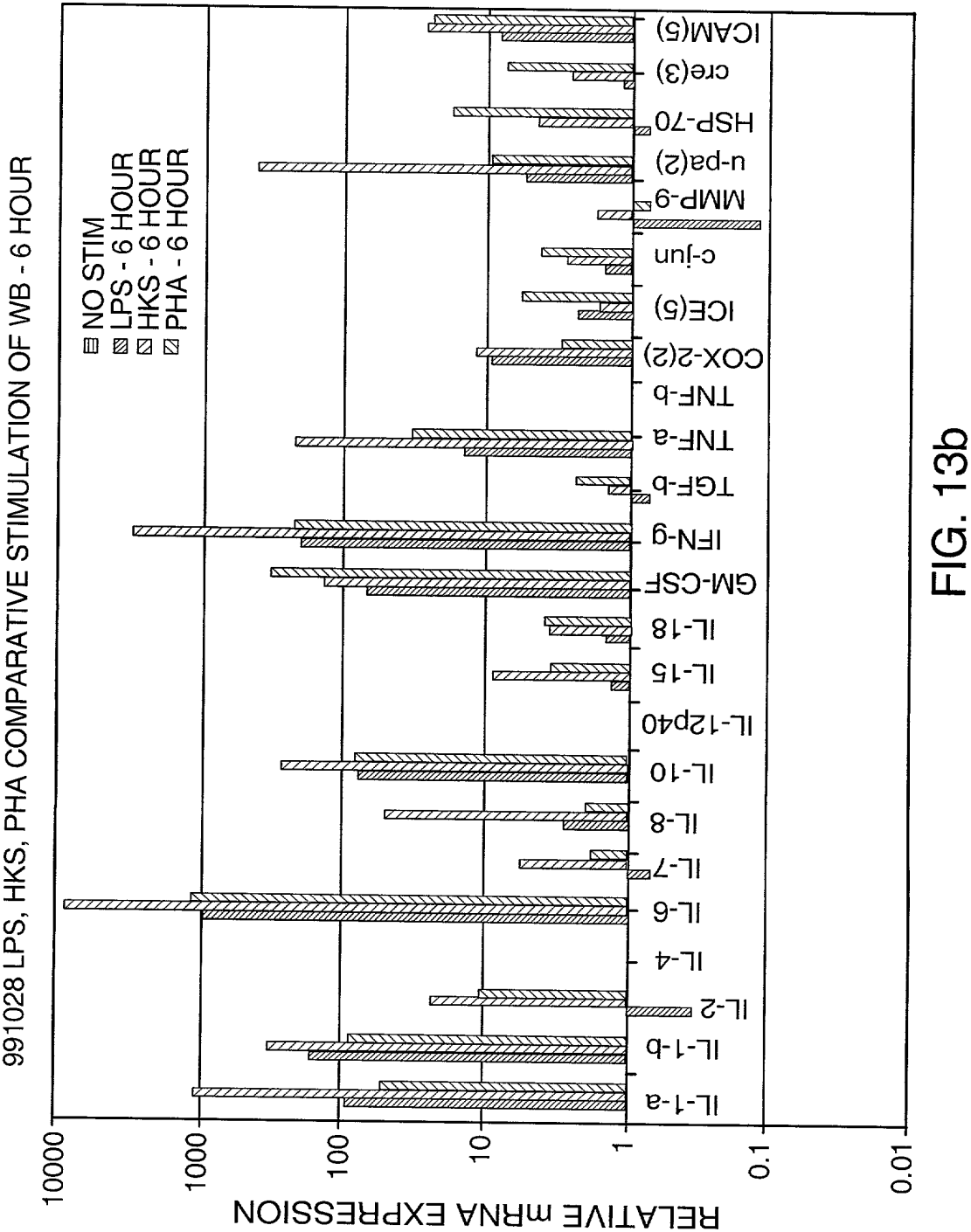


FIG. 13a



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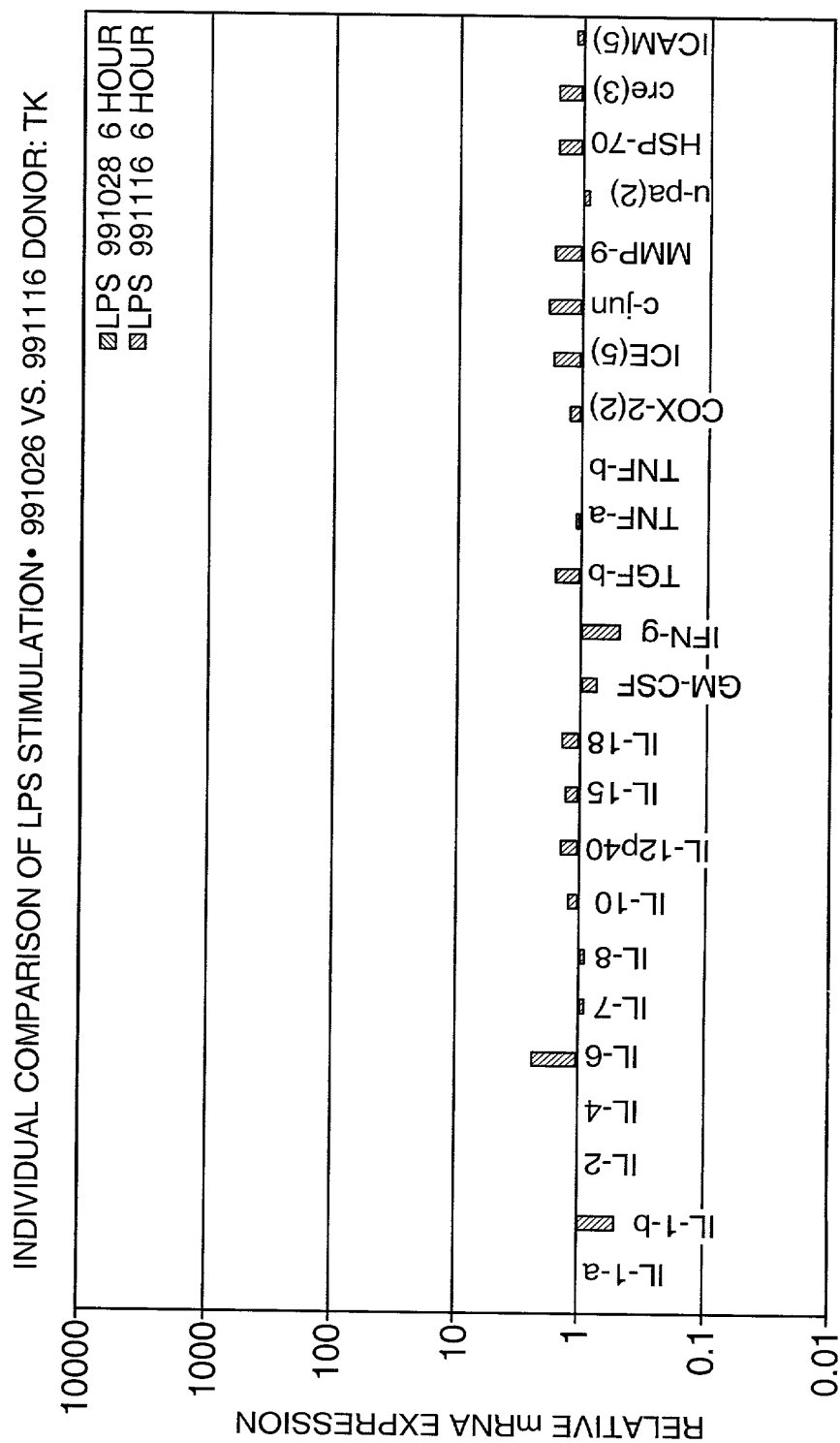


FIG. 13c



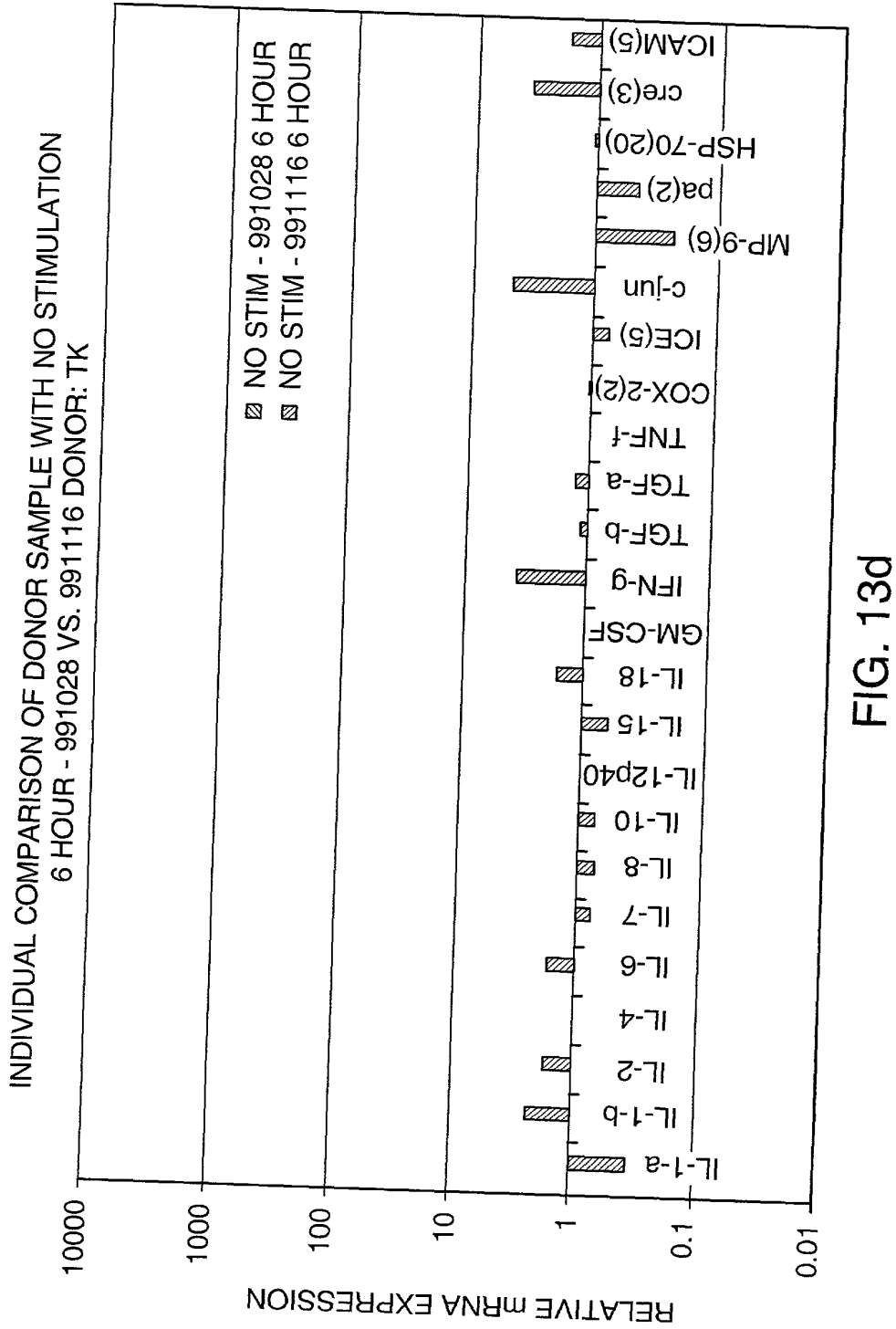


FIG. 13d

STIMULANT EFFECT ON METHYL PREDNISOLONE GENE EXPRESSION IN WHOLE BLOOD - 6 HOUR

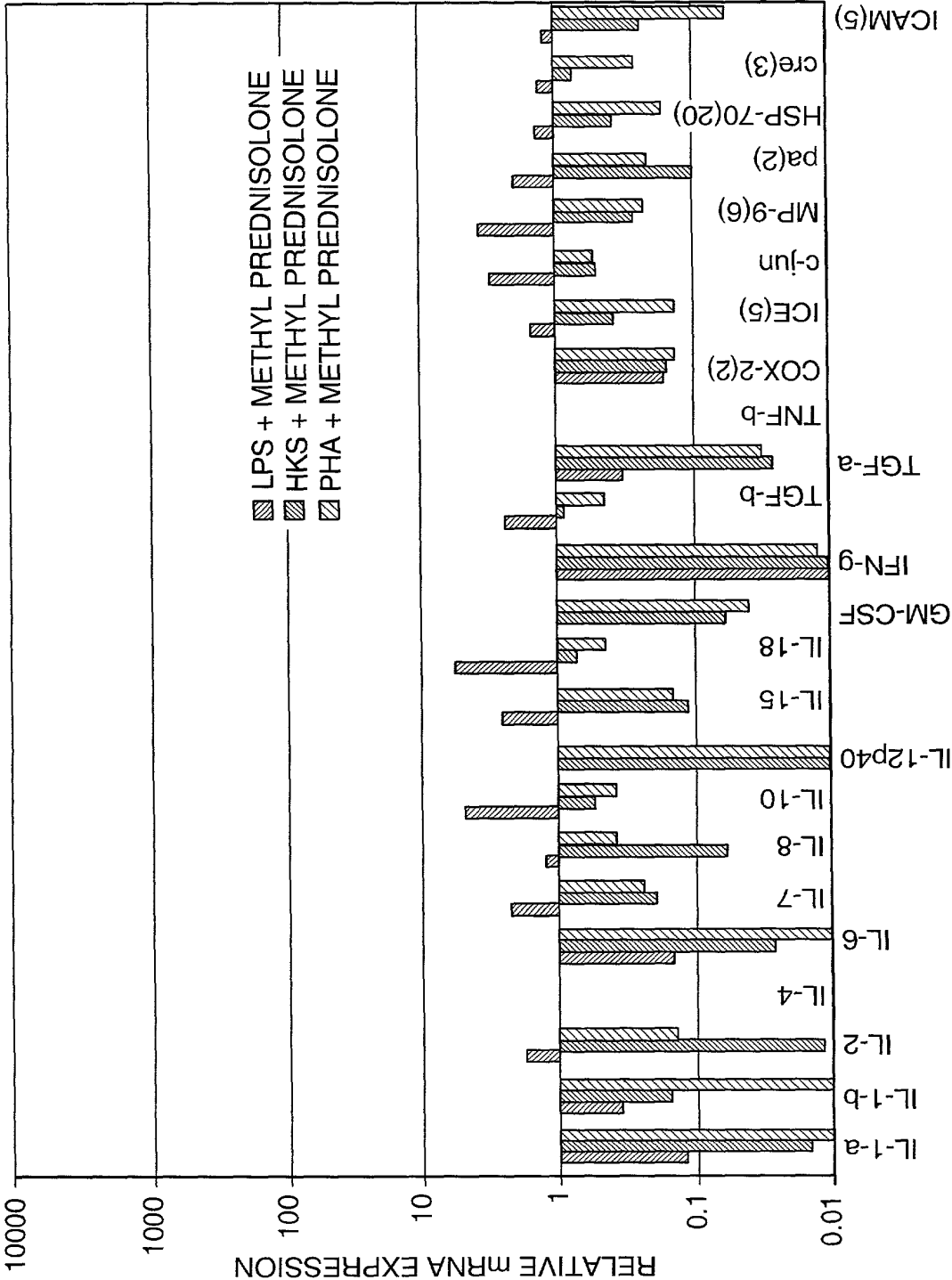


FIG. 14

COMPARISON OF IN VITRO AND IN VIVO GENE EXPRESSION IN RESPONSE TO CORTICOSTEROID TREATMENT

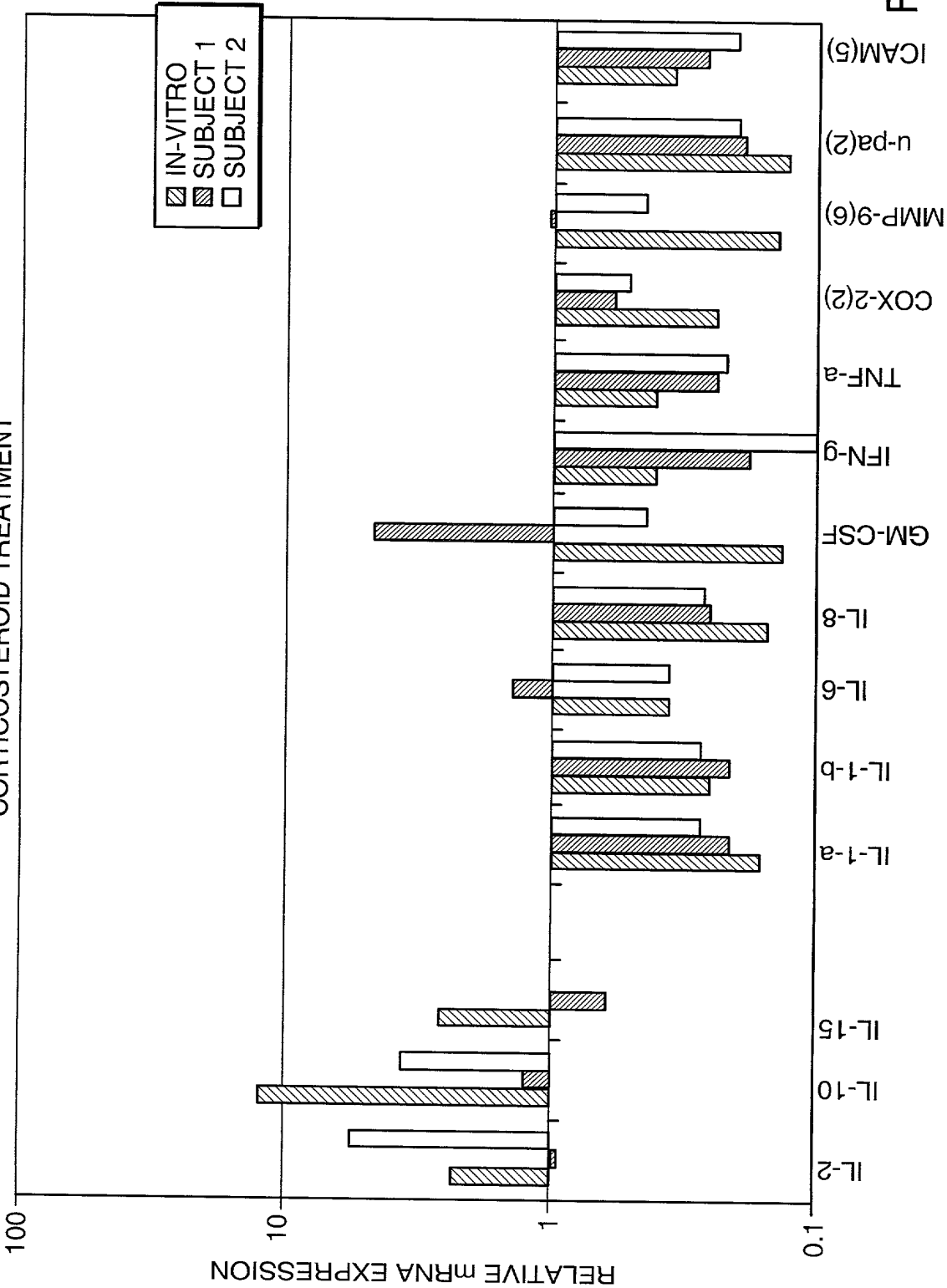


FIG. 15

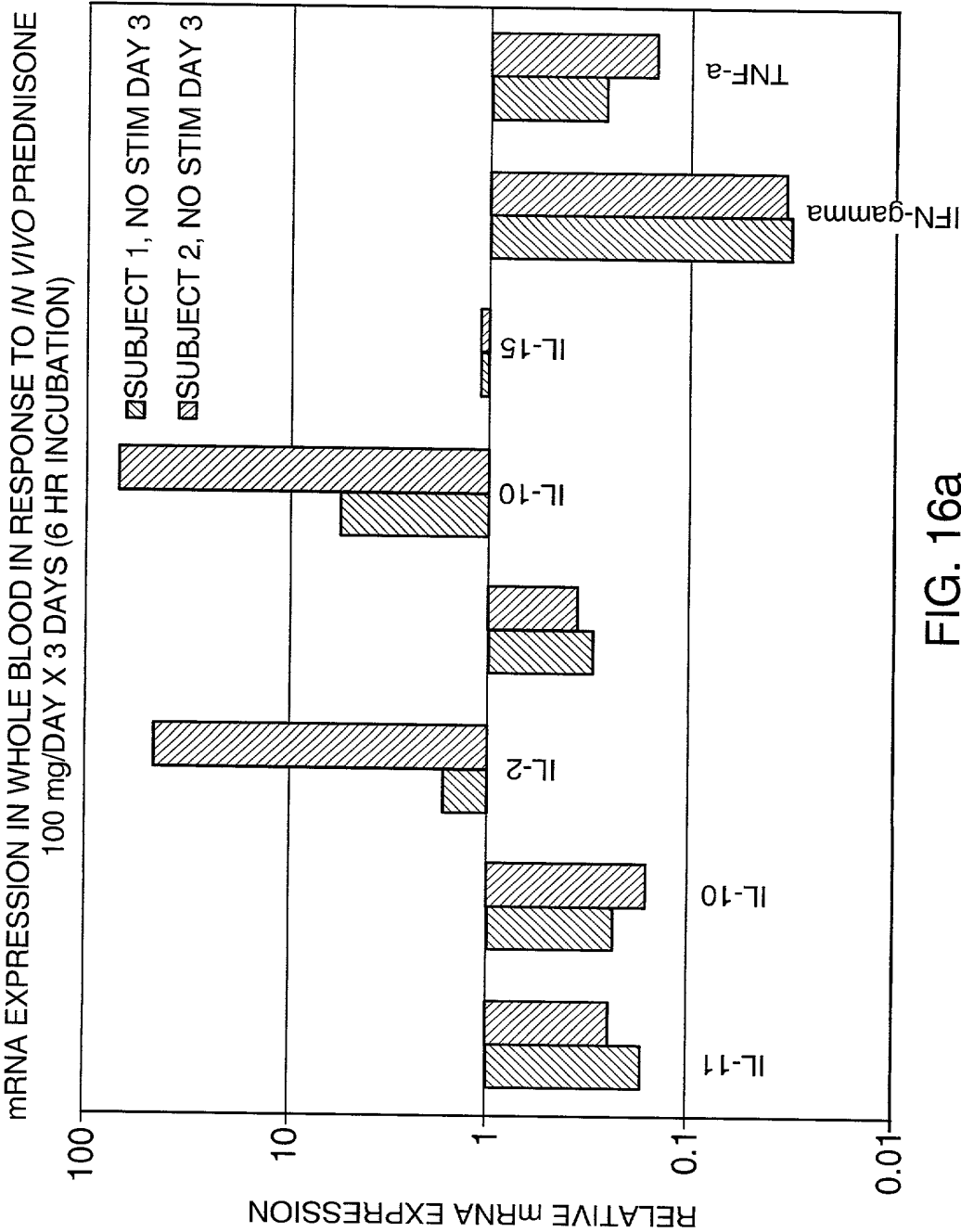


FIG. 16a

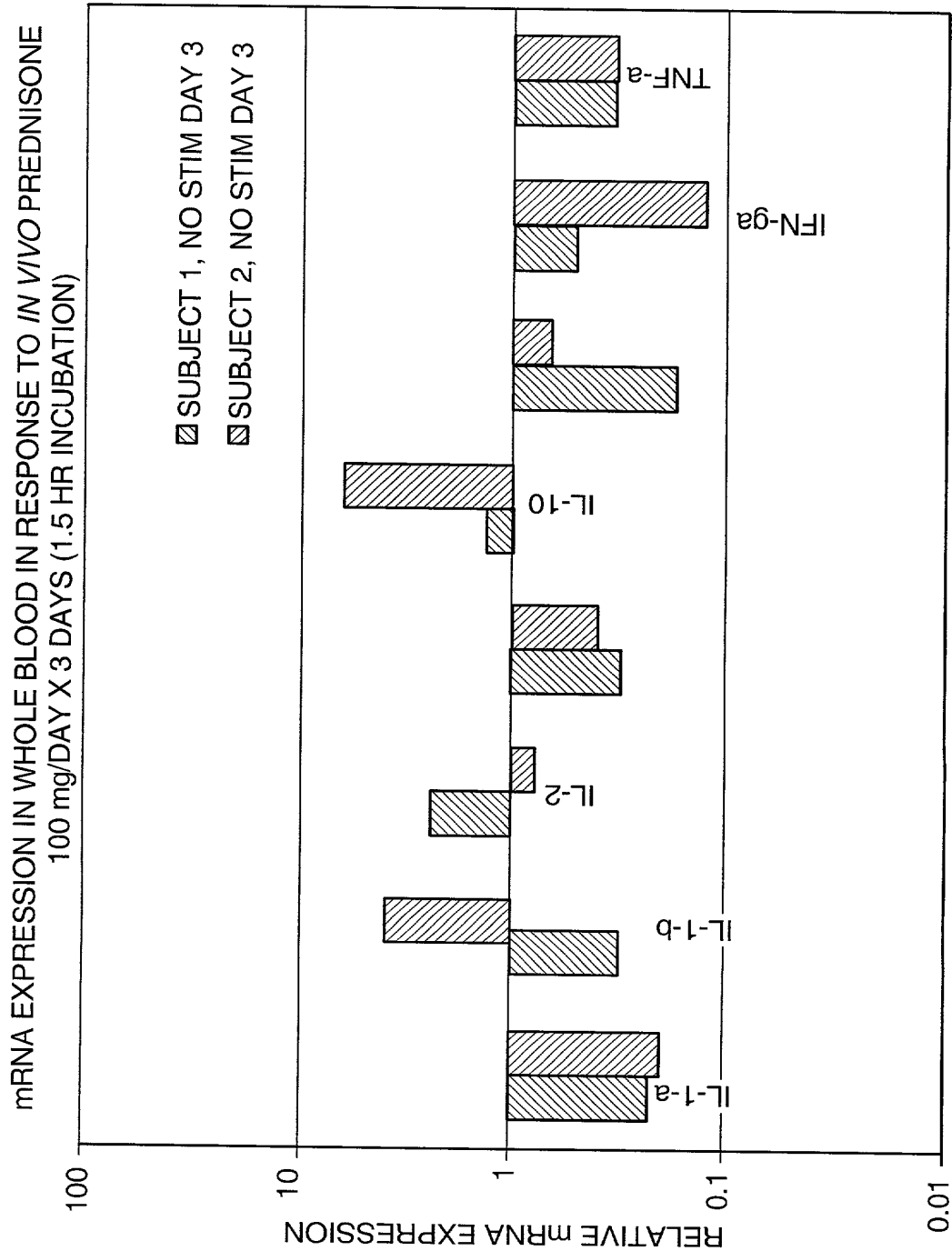


FIG. 16b

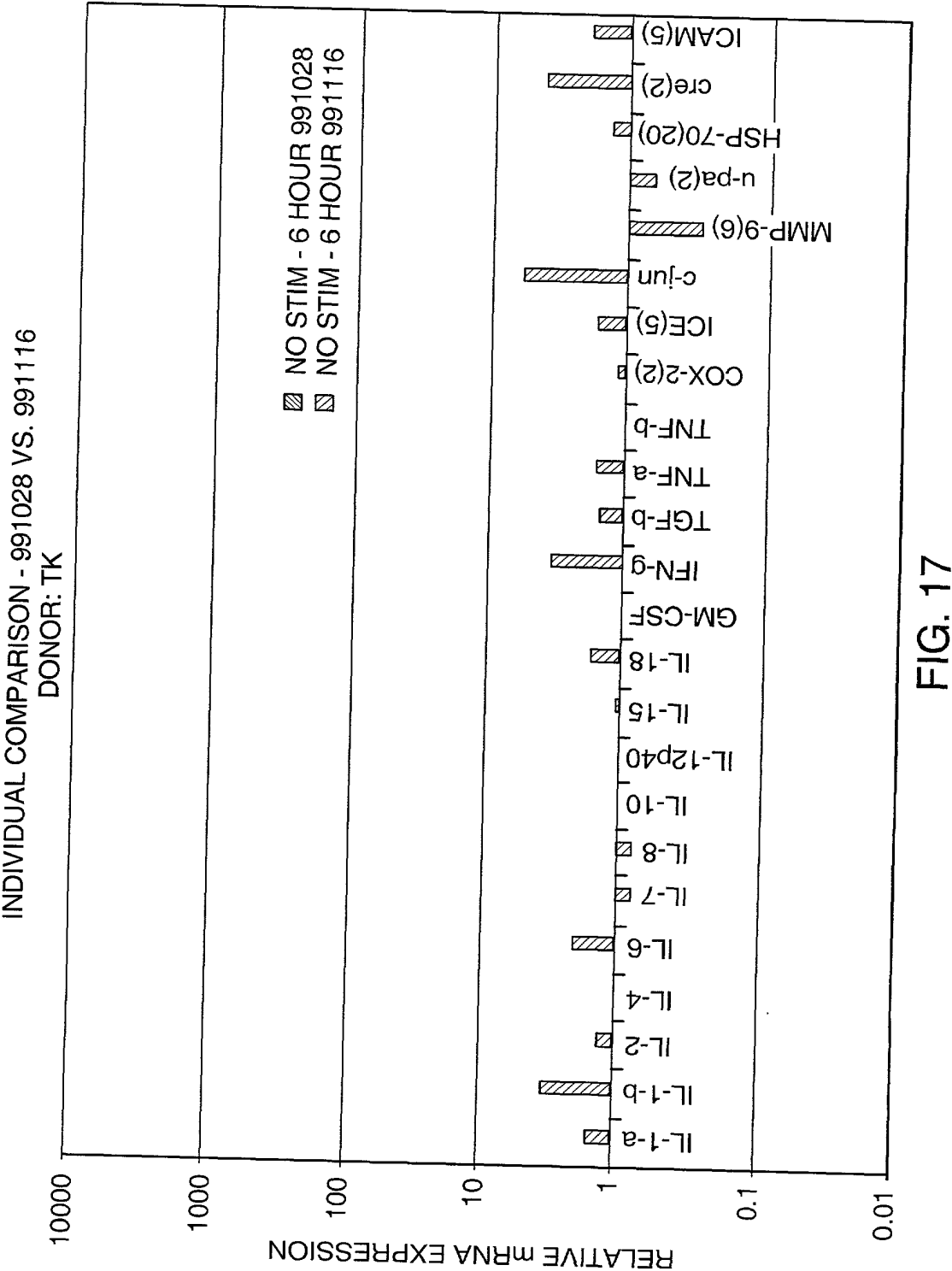


FIG. 17

PB001 STUDY 2, STAGE 3  
EFFECTS OF DRUG ON WHOLE BLOOD  
DONOR 1

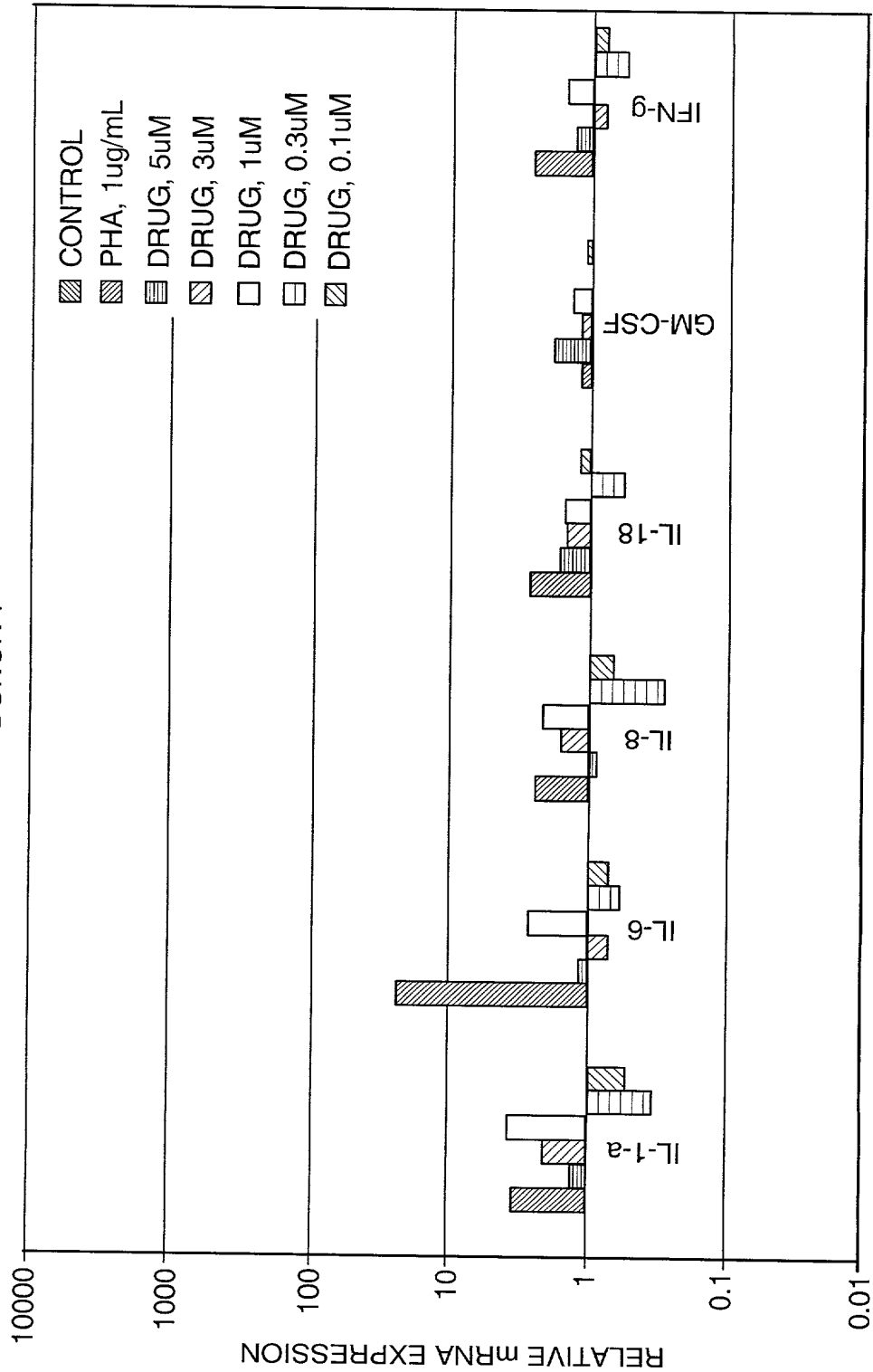


FIG. 18a

PB001 STUDY 2, STAGE 3  
EFFECTS OF DRUG ON WHOLE BLOOD  
DONOR 2

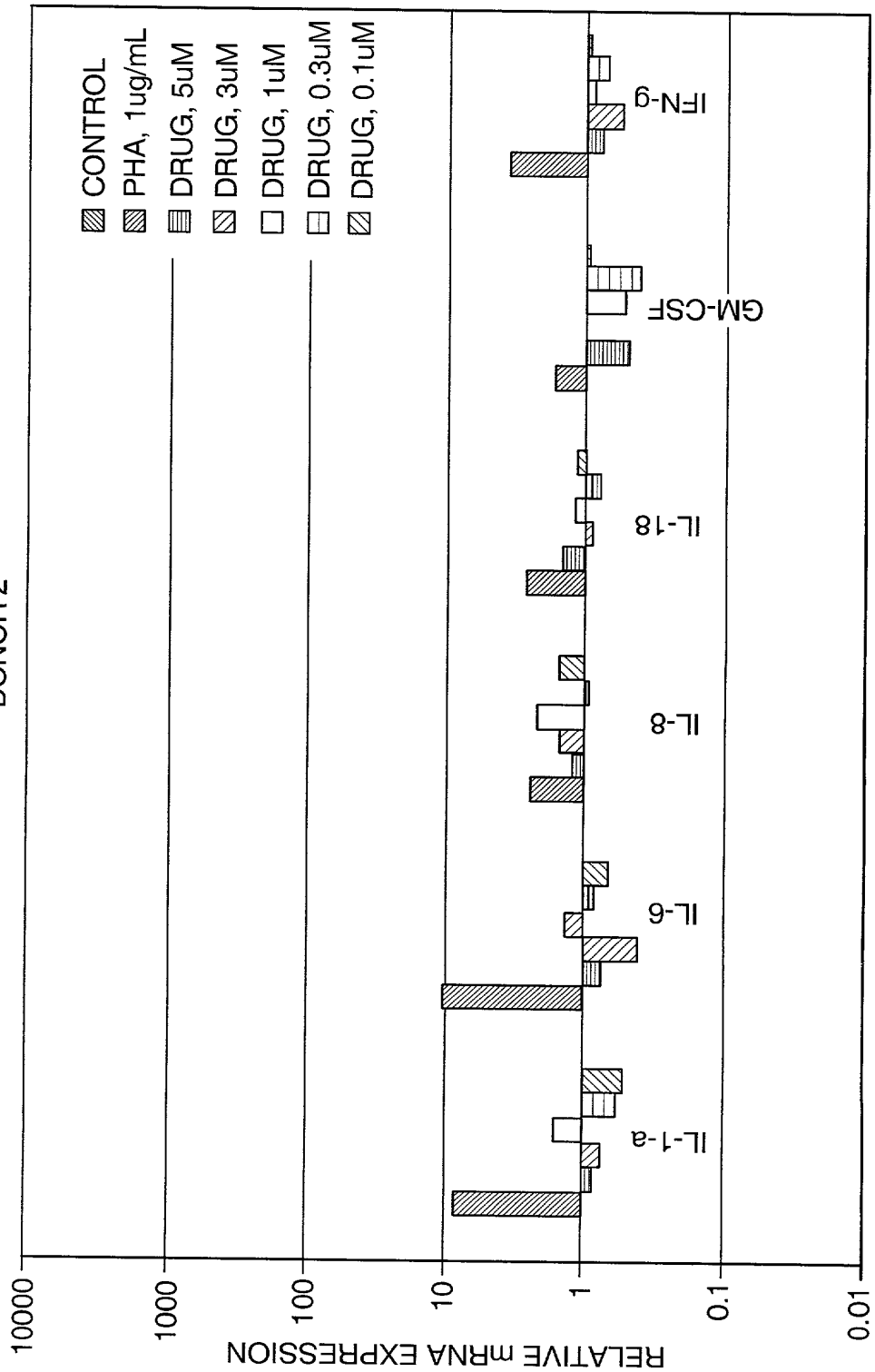


FIG. 18b



PB001 STUDY 2, STAGE 3  
EFFECTS OF DRUG ON WHOLE BLOOD  
DONOR 3

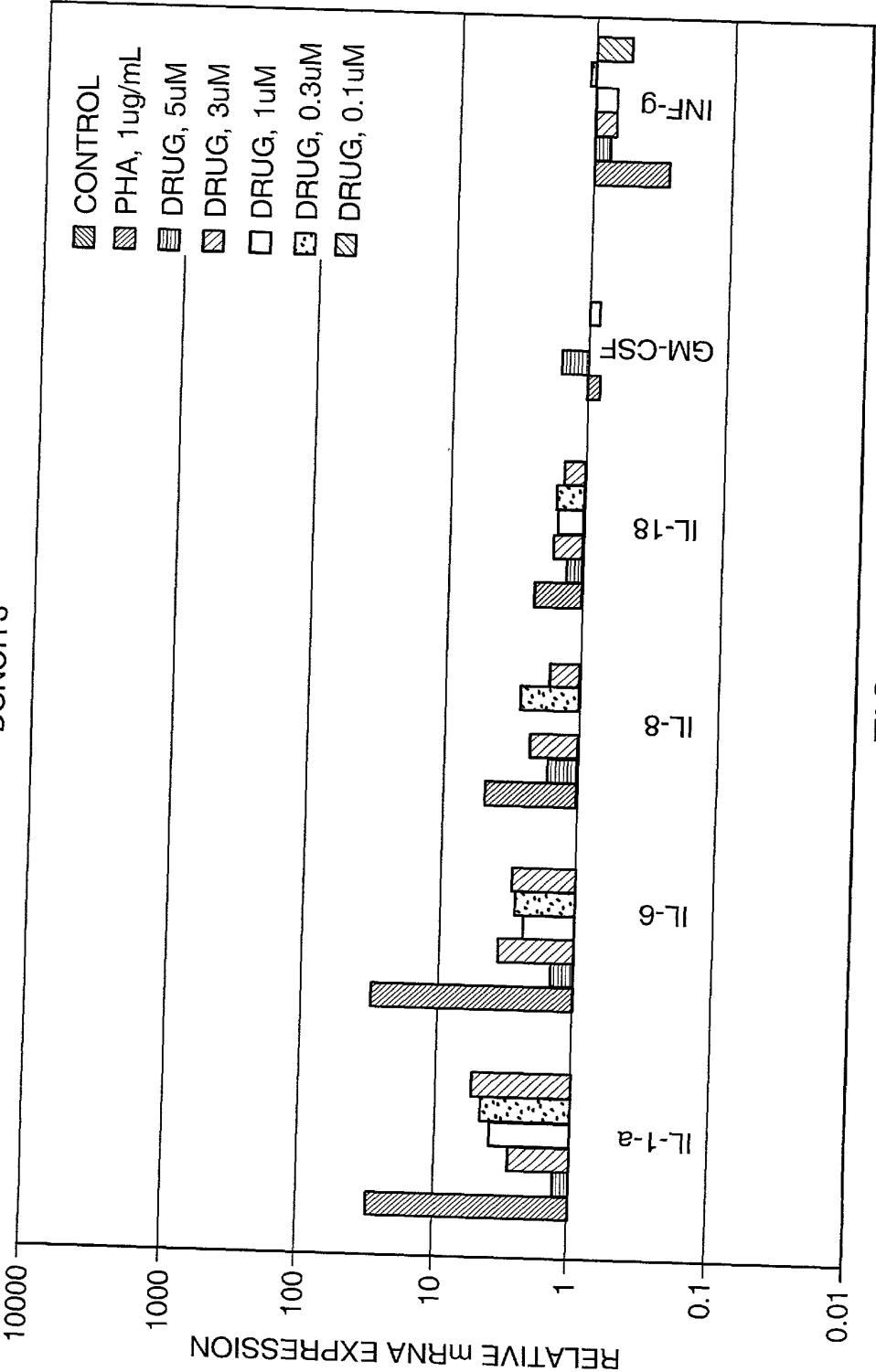


FIG. 18c

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PB001 STUDY 2, STAGE 3  
 EFFECTS OF DRUG ON WHOLE BLOOD  
 DONOR 4

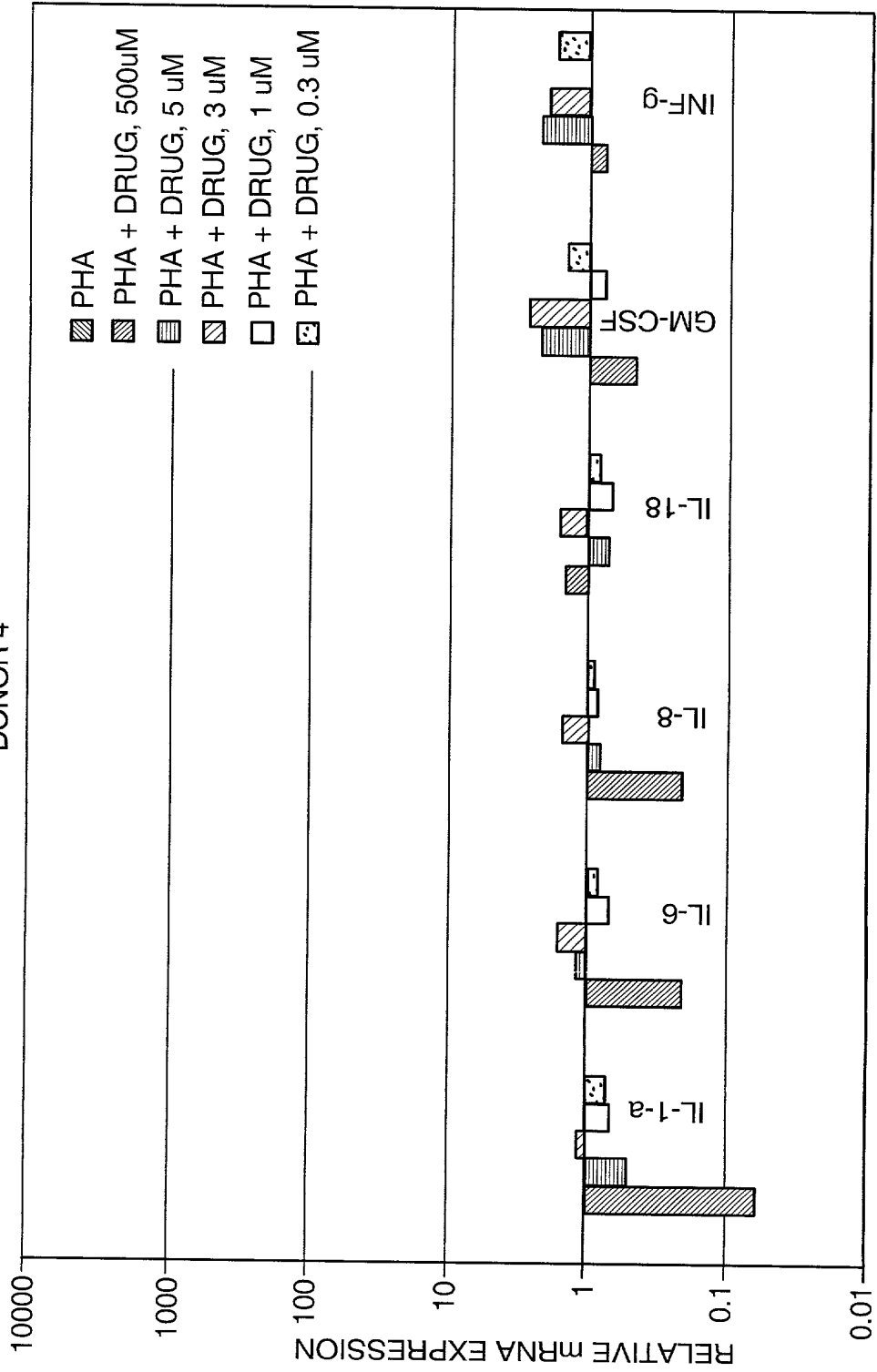


FIG. 18d

PB001 STUDY 2, STAGE 3  
EFFECTS OF DRUG ON WHOLE BLOOD  
DONOR 5

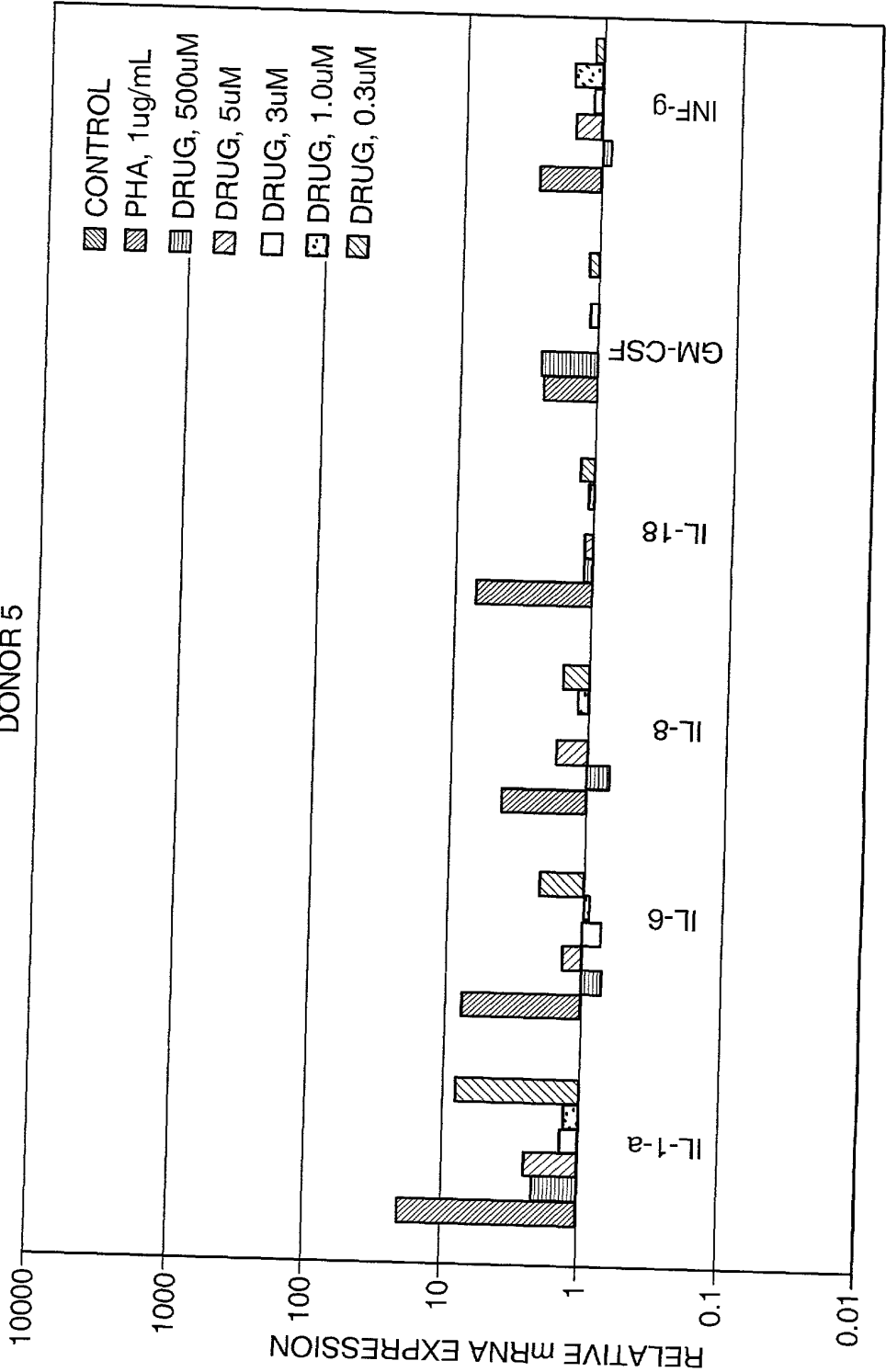


FIG. 18e

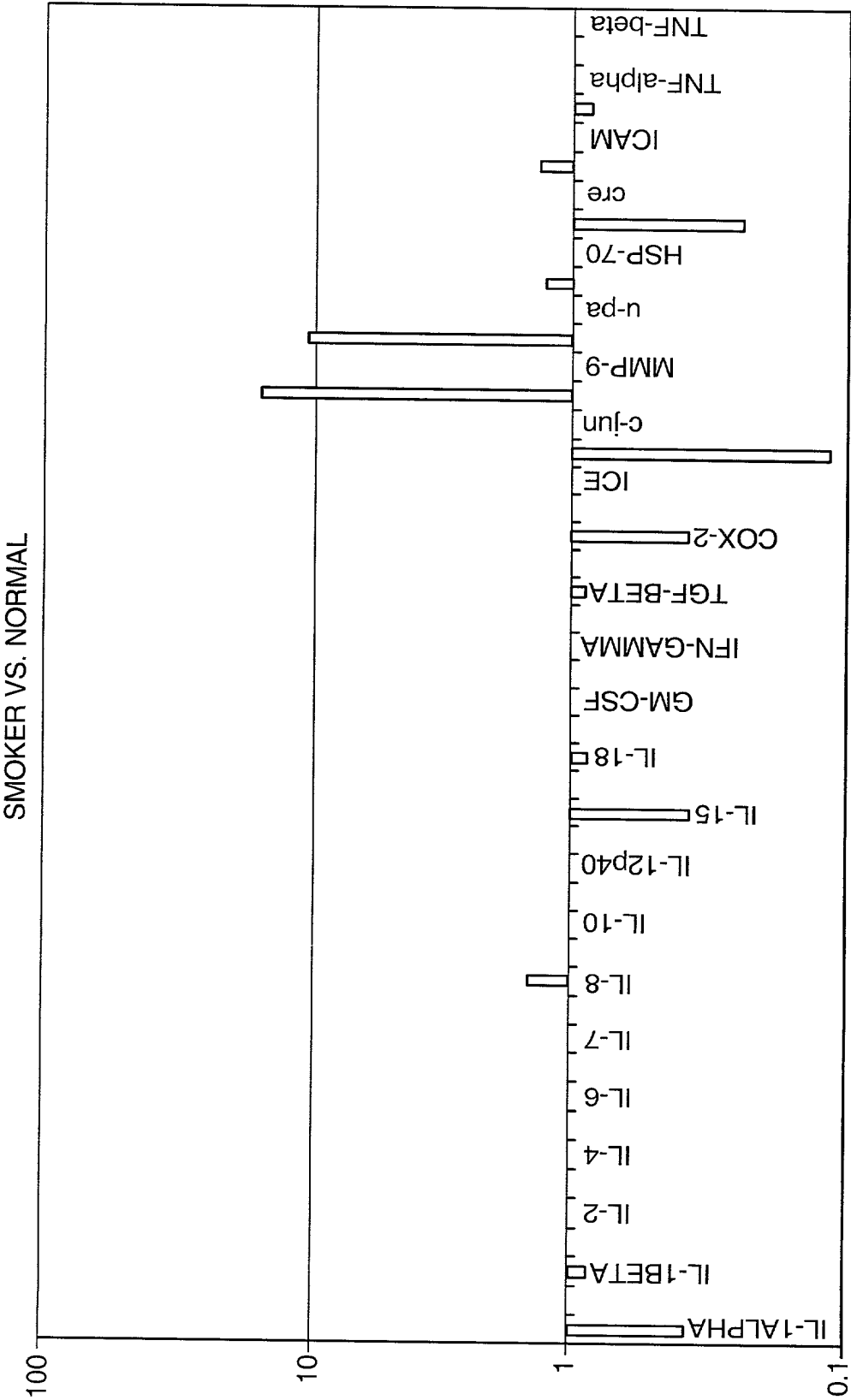


FIG. 19a

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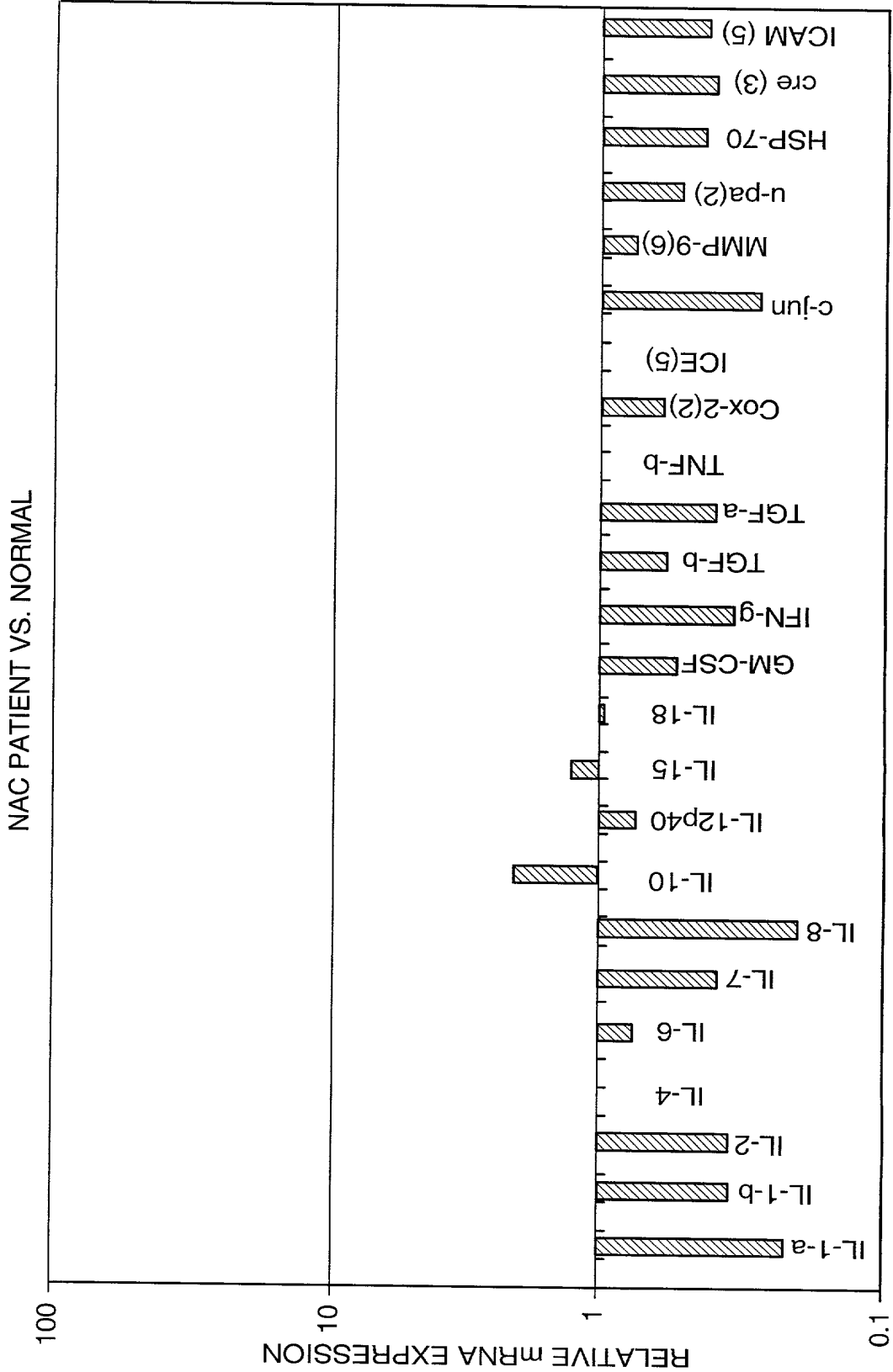


FIG. 19b

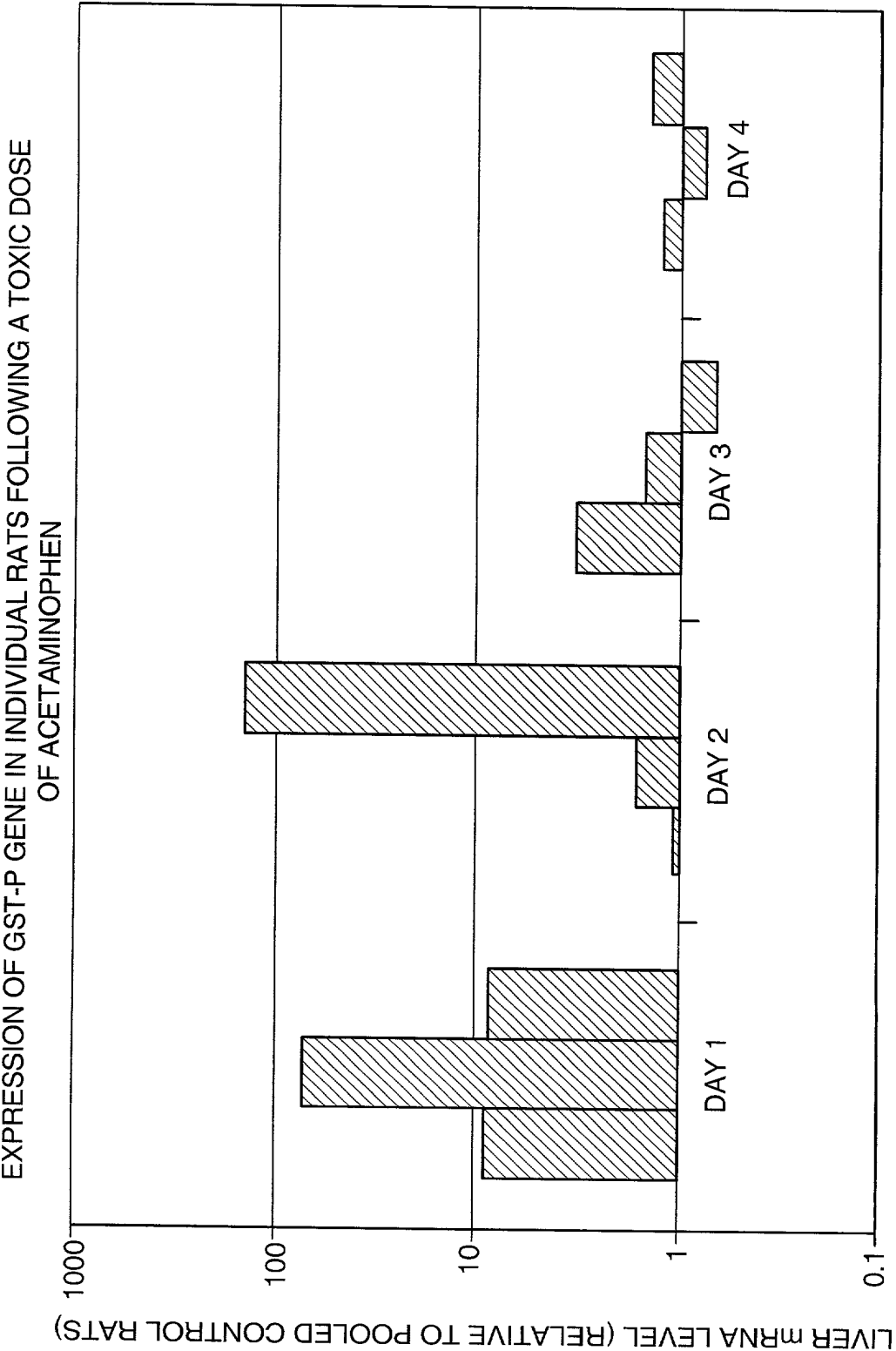


FIG. 20

COMPARATIVE HERBAL PROFILING SHOWS DIFFERENCES AMONG ANTI-INFLAMMATORY HERBS SUCH AS ECHINACEA, ARNICA AND SIBERIAN GINSENG

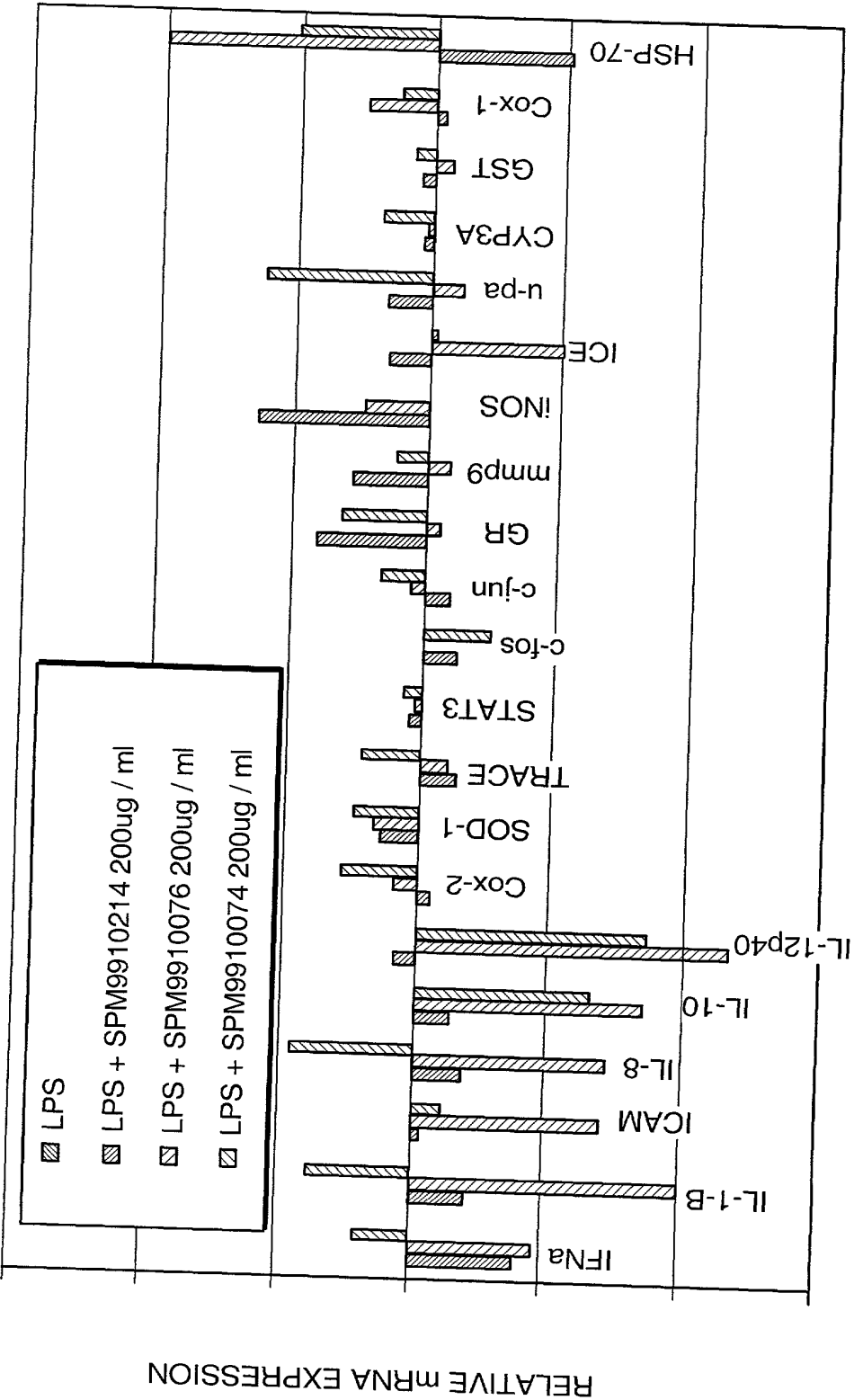


FIG. 21

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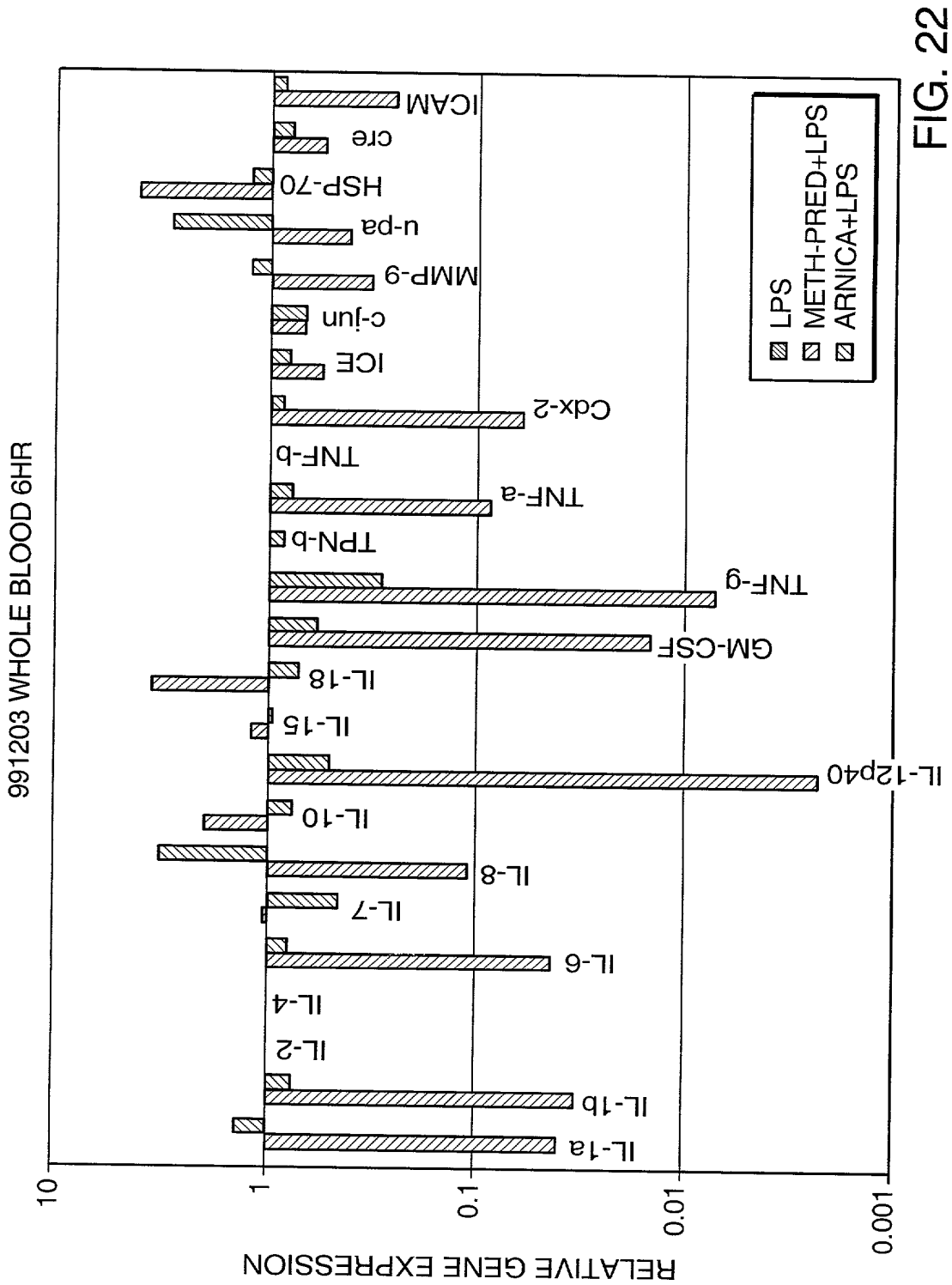


FIG. 22



PRECISION PROFILES CAN CORRELATE WITH A DOSE RESPONSE FOR A GIVEN HERBAL

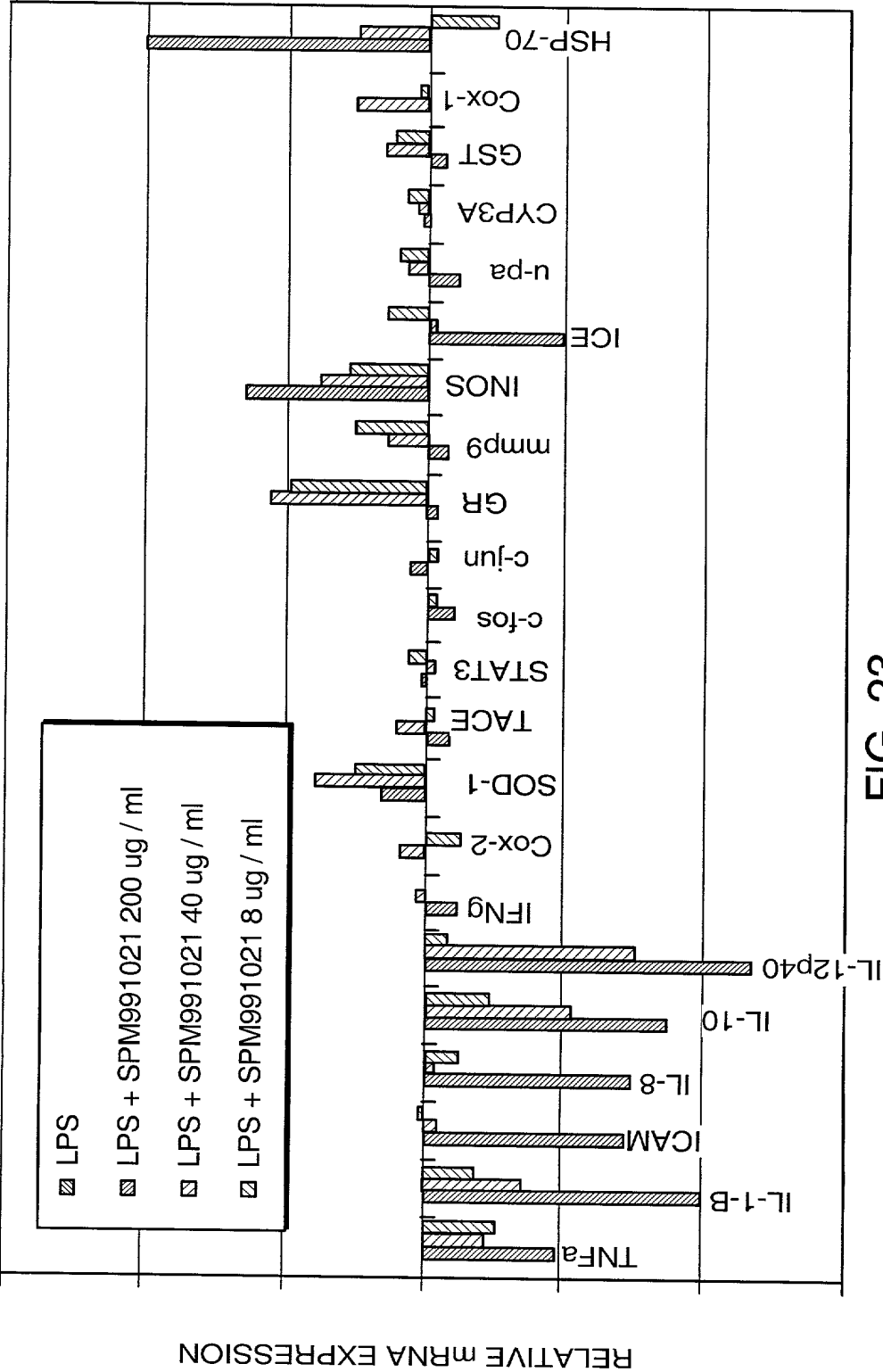


FIG. 23

PRECISION PROFILES REVEAL CONTAMINATION WITH ENDOTOXIN  
 AMONG DIFFERENT COMMERCIAL BRANDS AS REVEALED IN SPM010  
 AND SPM016

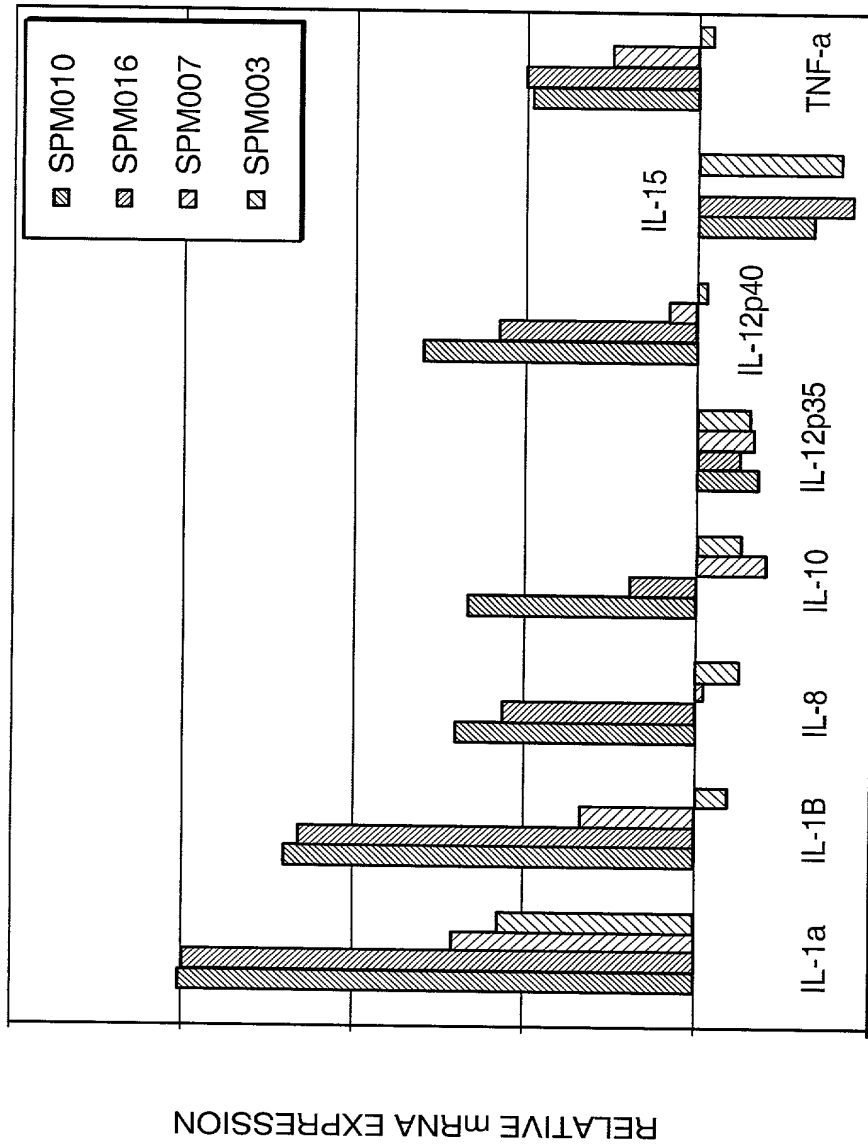


FIG. 24

HIGH DOSE COMPARISON OF UNSTIMULATED THP-1 CELL  
TREATMENT WITH THREE HERBAL PREPARATIONS SHOWS SIGNIFICANT  
VARIATION IN EFFICACY

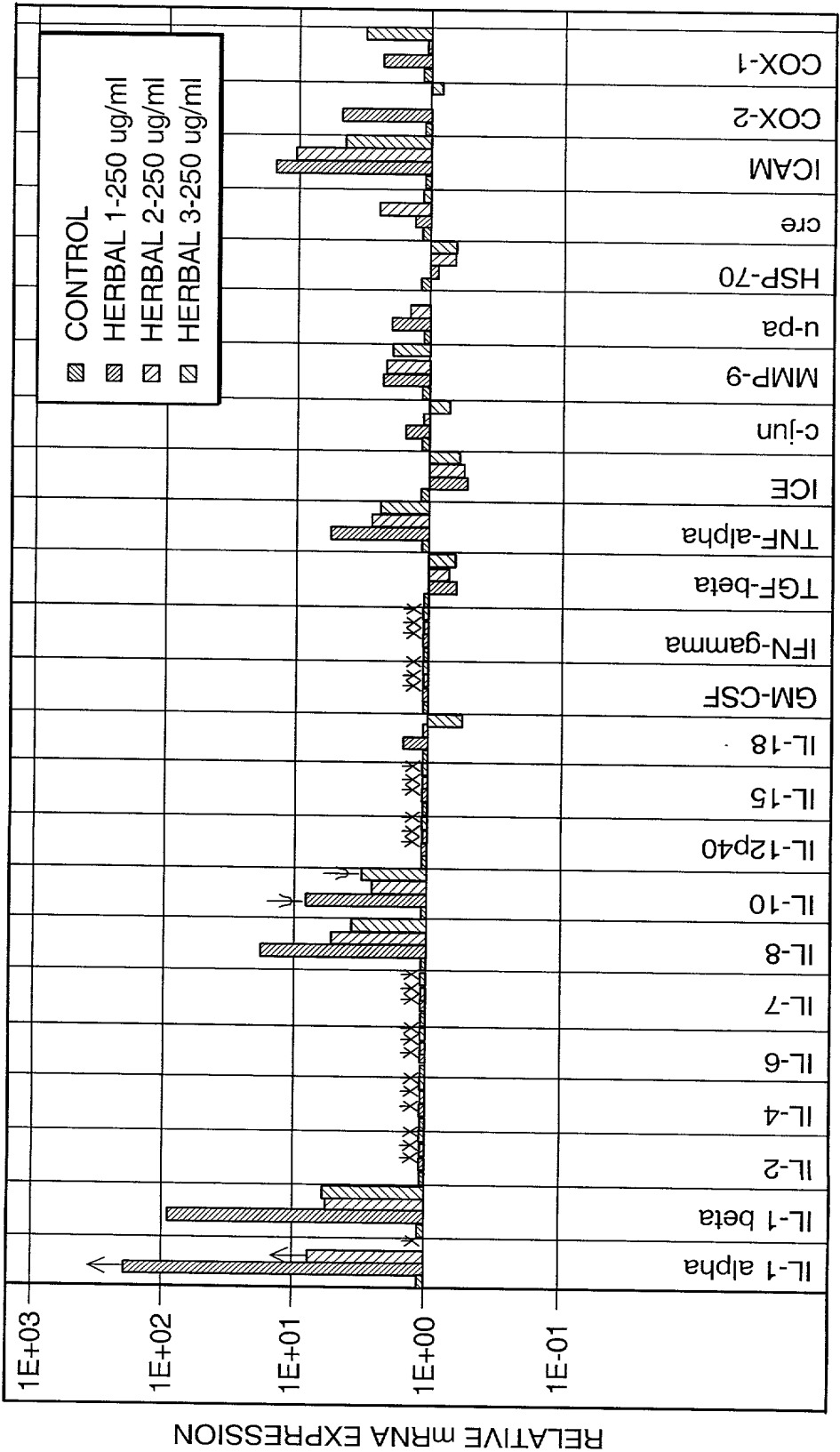


FIG. 25a

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TREATMENT OF UNSTIMULATED THP-1 CELLS WITH A SINGLE HERBAL SHOWS A NICE DOSE RESPONSE AMONG A SUBSET OF GENES

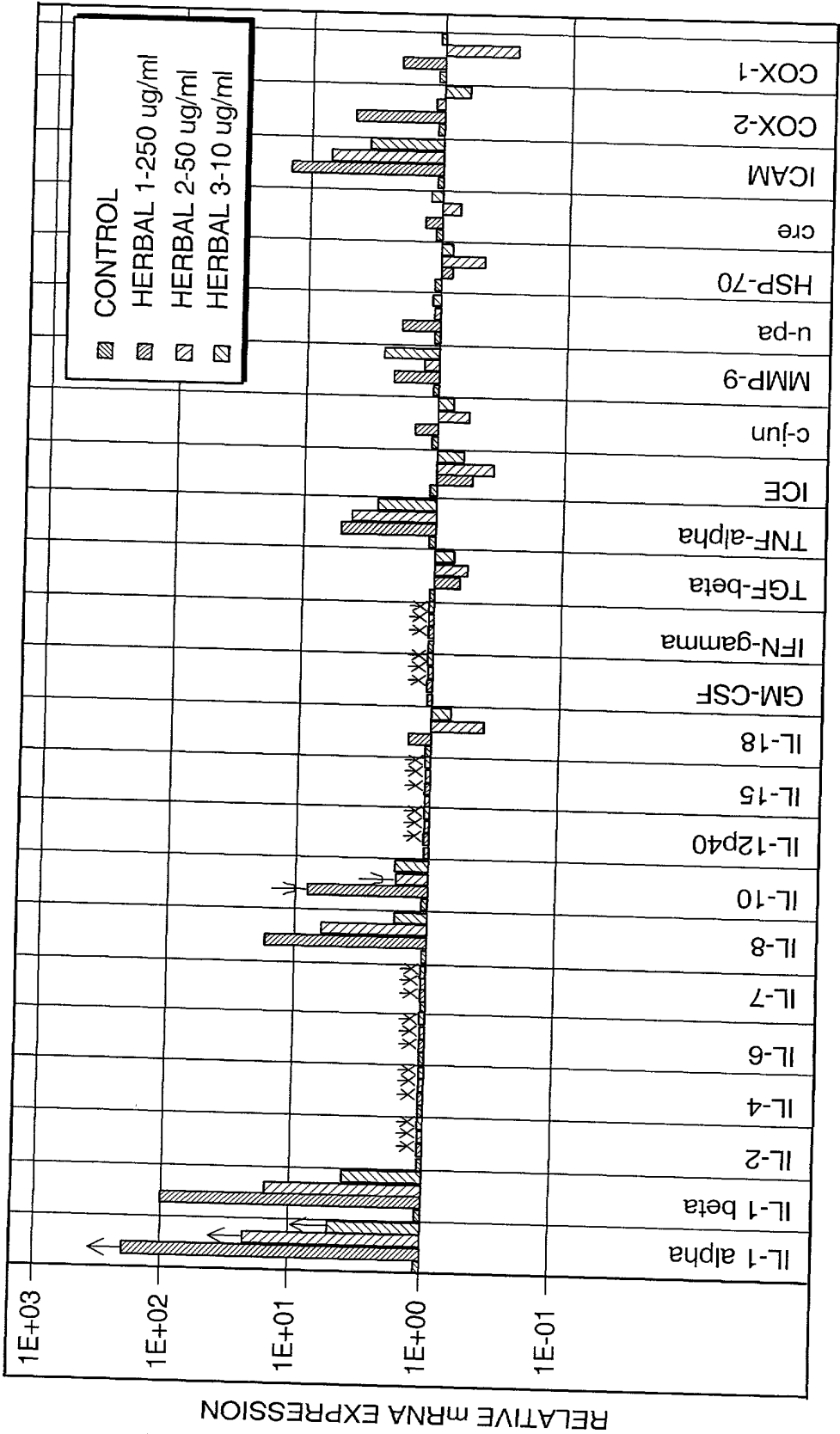


FIG. 25b

PRECISION PROFILES ALLOW FOR COMPARISON OF COMMERCIAL ECHINACEAS (E1-E4)

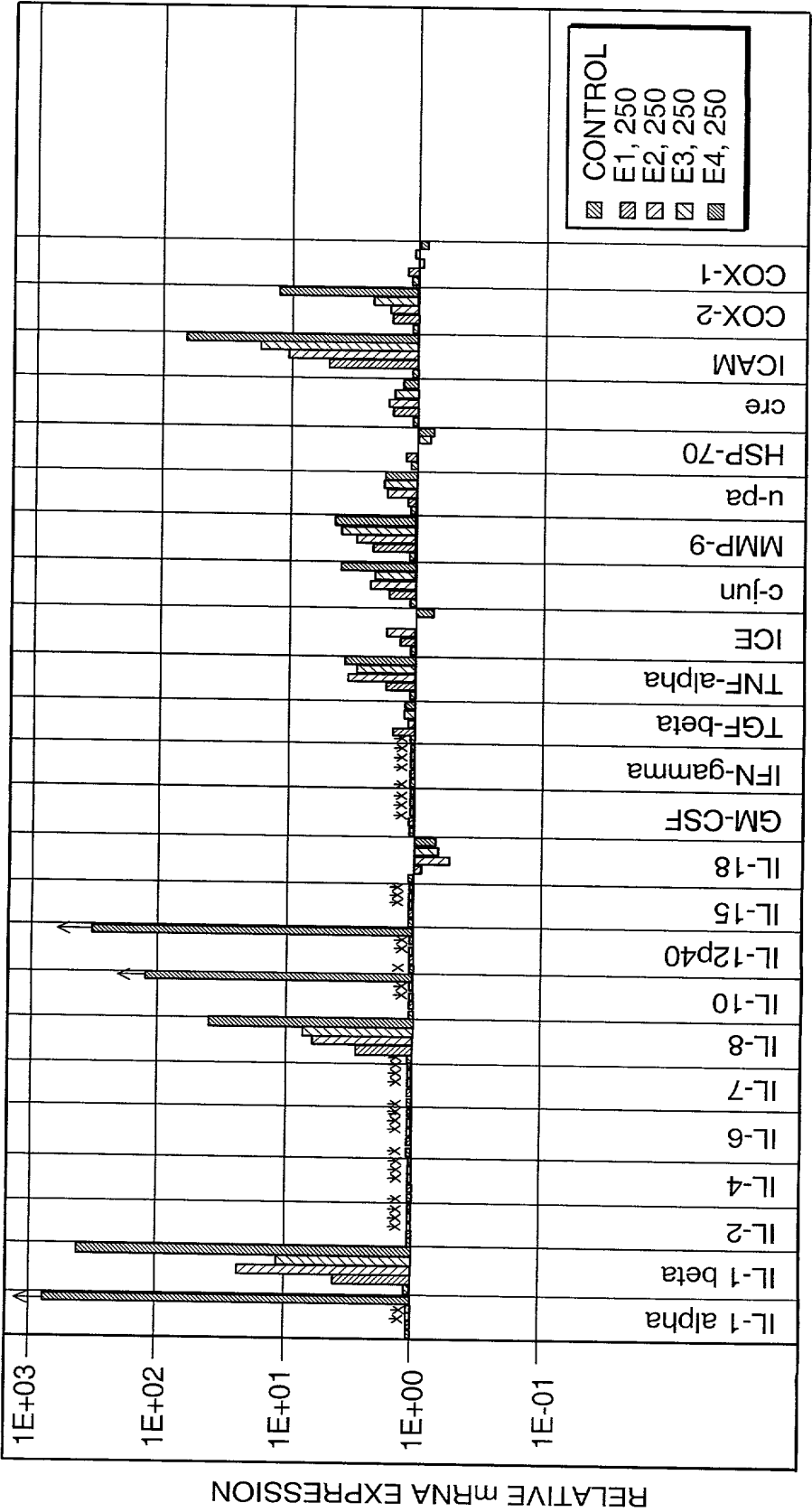


FIG. 25c

INFLAMMATION PRECISION PANEL SUBSET  
DEMONSTRATES STEROID RESPONSE IN 3 DAY STUDY

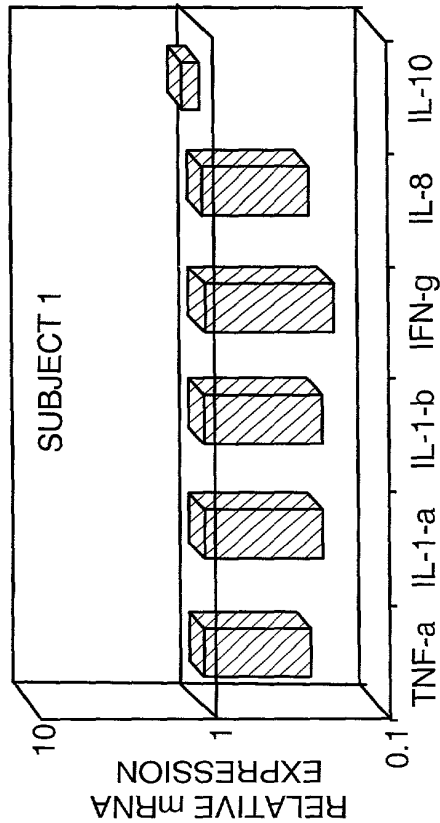


FIG. 26a

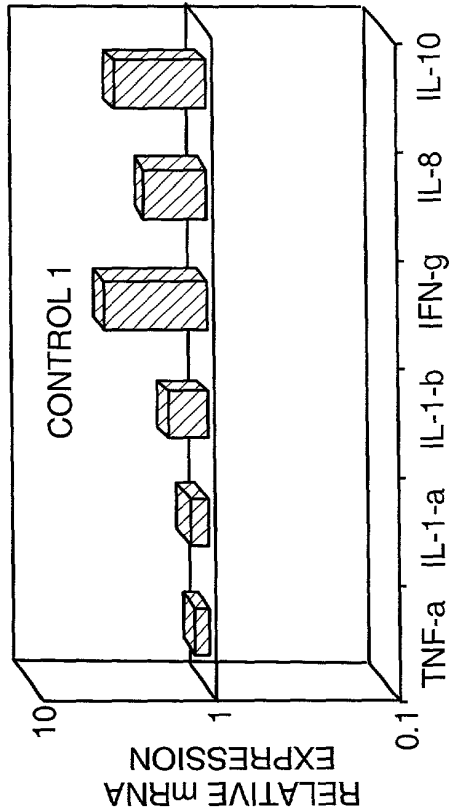


FIG. 26b

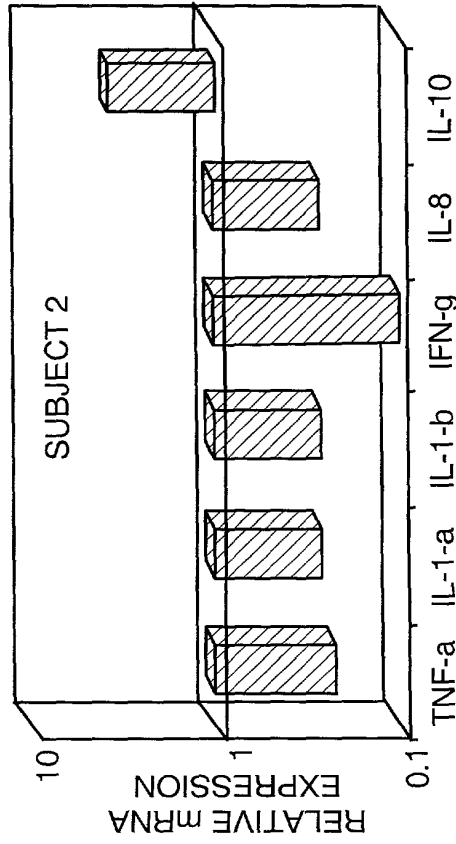


FIG. 26c

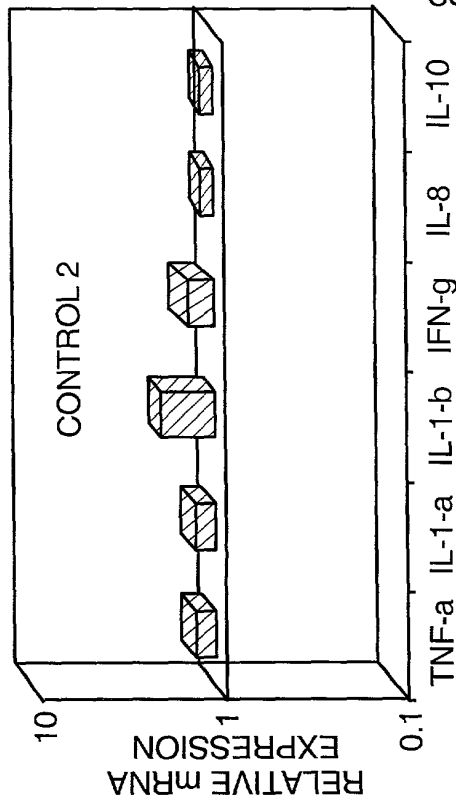


FIG. 26d

COMPARISON OF METHYLPREDNISONE AND HIGH-DOSE  
 IBUPROFEN IN PATIENTS USING INFLAMMATION PRECISION PANEL SUBSET

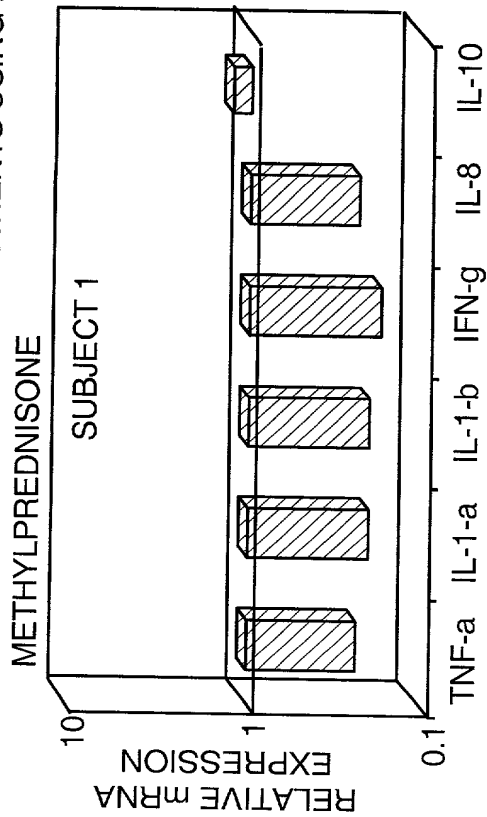


FIG. 27a

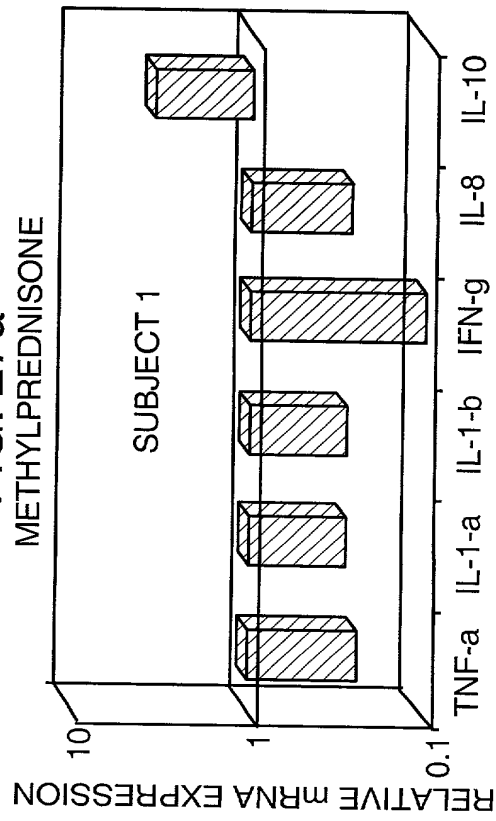


FIG. 27c

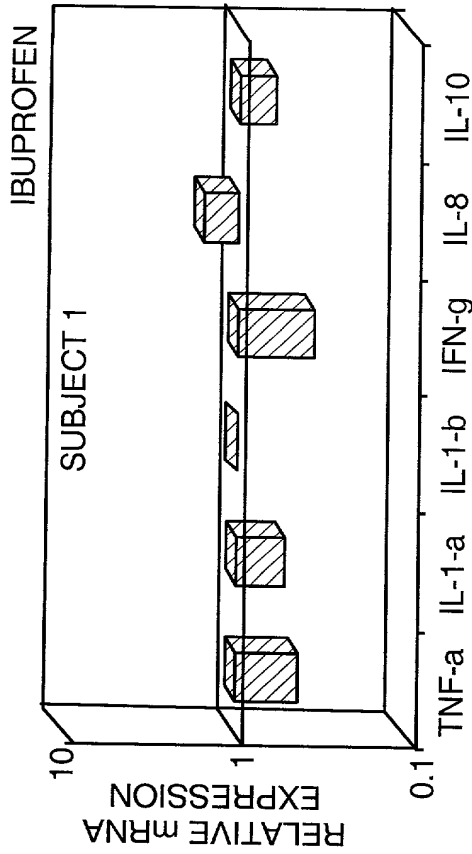


FIG. 27b

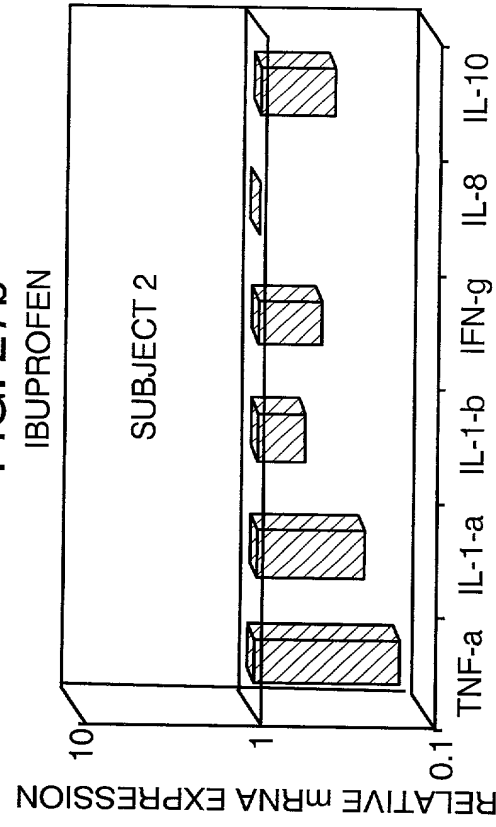


FIG. 27d

INFLAMMATION PRECISION PANEL SUBSET IDENTIFIES COPD PATIENTS

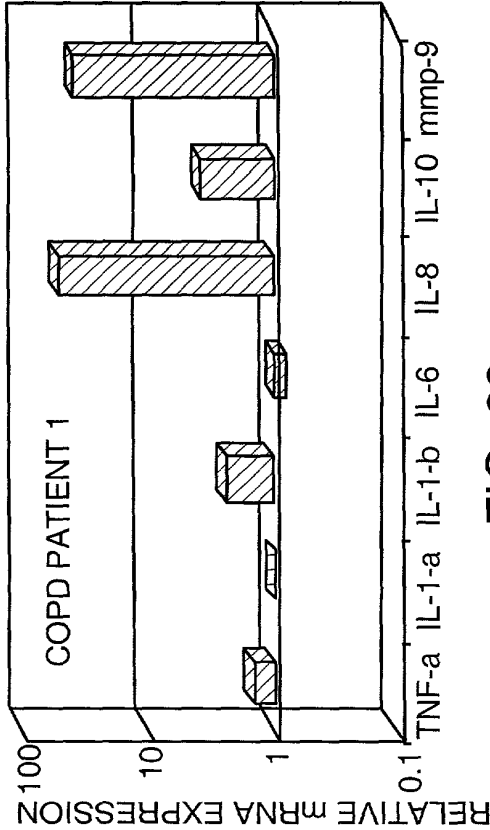


FIG. 28a

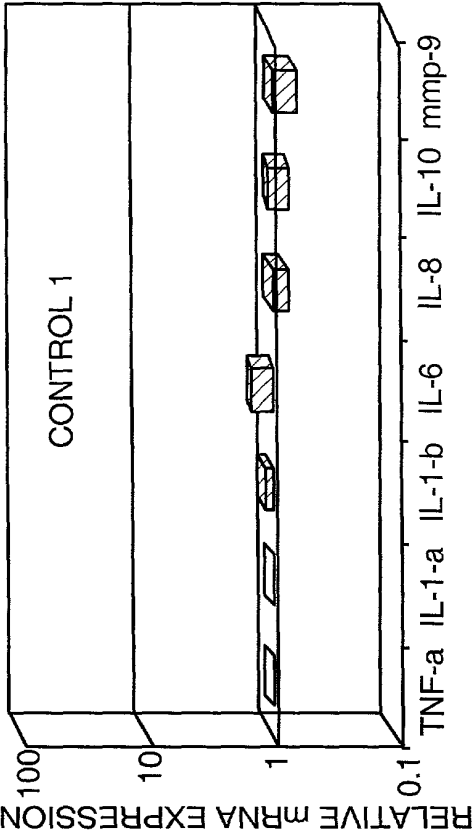


FIG. 28b

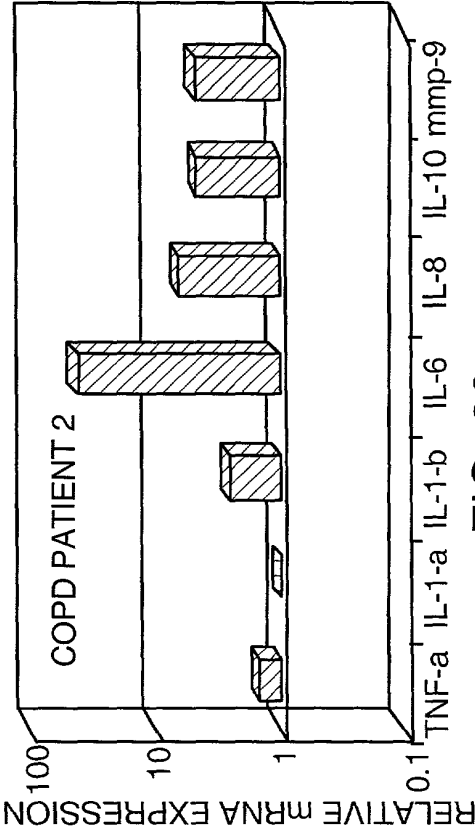


FIG. 28c

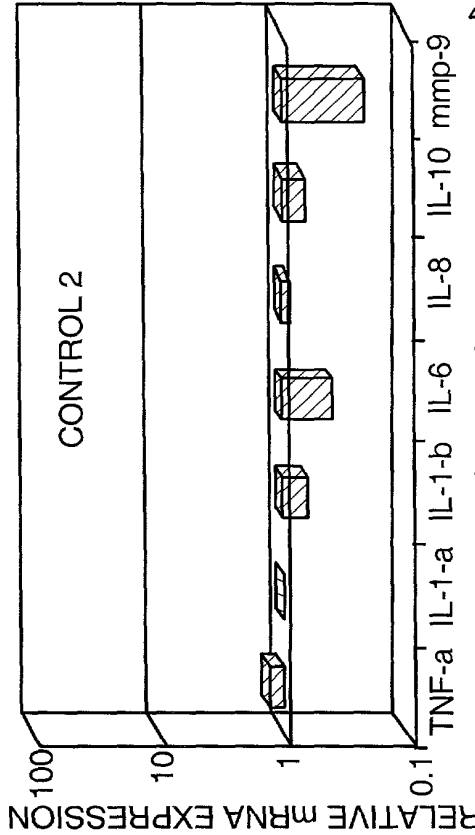


FIG. 28d



COMPARISON OF CALIBRATED PROFILE DATA SETS (USING INFLAMMATION PRECISION PANEL SUBSET) AFTER IN-VITRO AND IN-VIVO DRUG EXPOSURE (STEROIDS)--STUDY 1

AUGUST 1999  
 SUBJECT 1JC

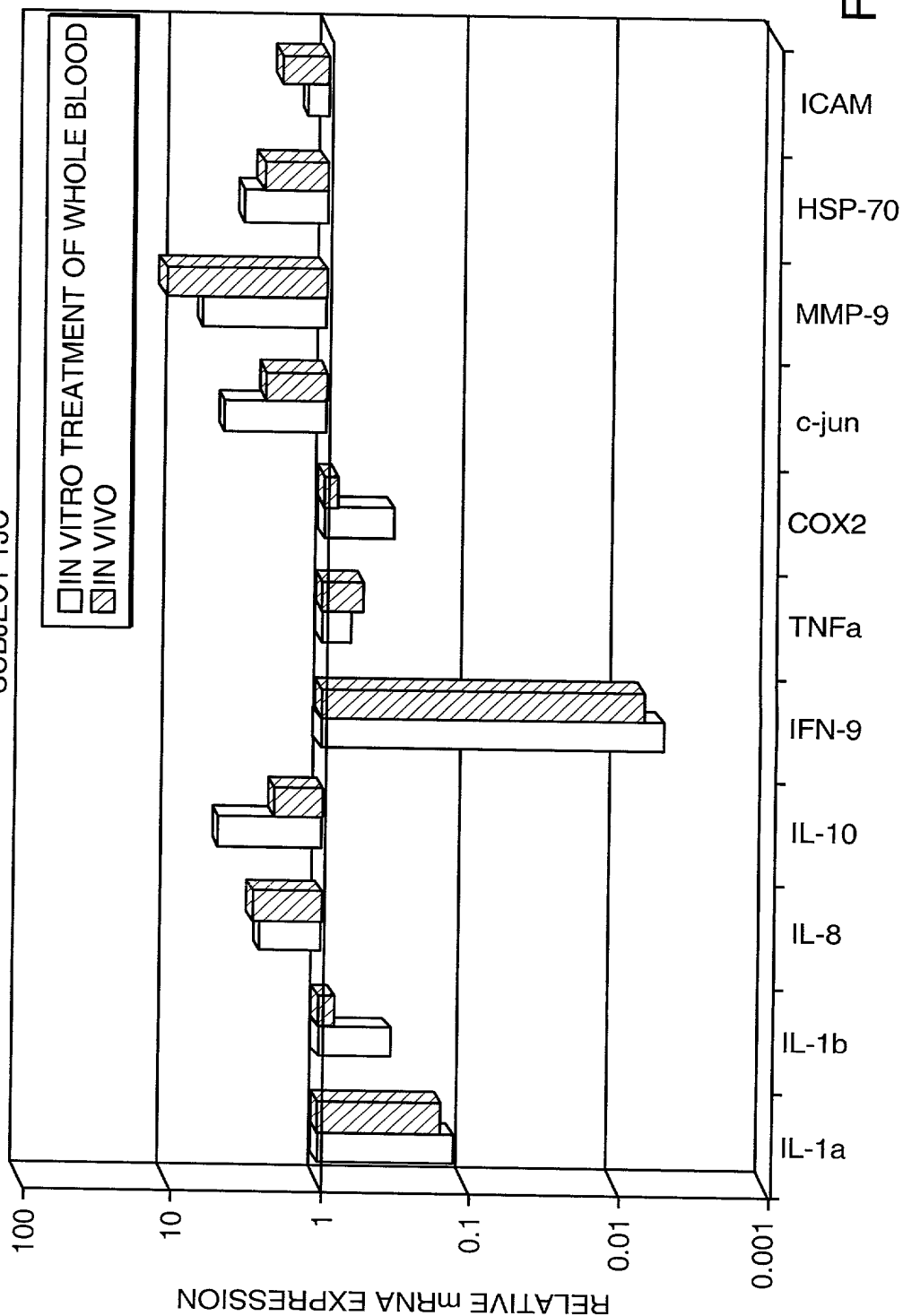


FIG. 29a

COMPARISON OF CALIBRATED PROFILE DATA SETS (USING INFLAMMATION PRECISION PANEL SUBSET) AFTER IN-VITRO AND IN-VIVO DRUG EXPOSURE (STEROIDS)--STUDY 2

AUGUST 2000  
 SUBJECT 1JC

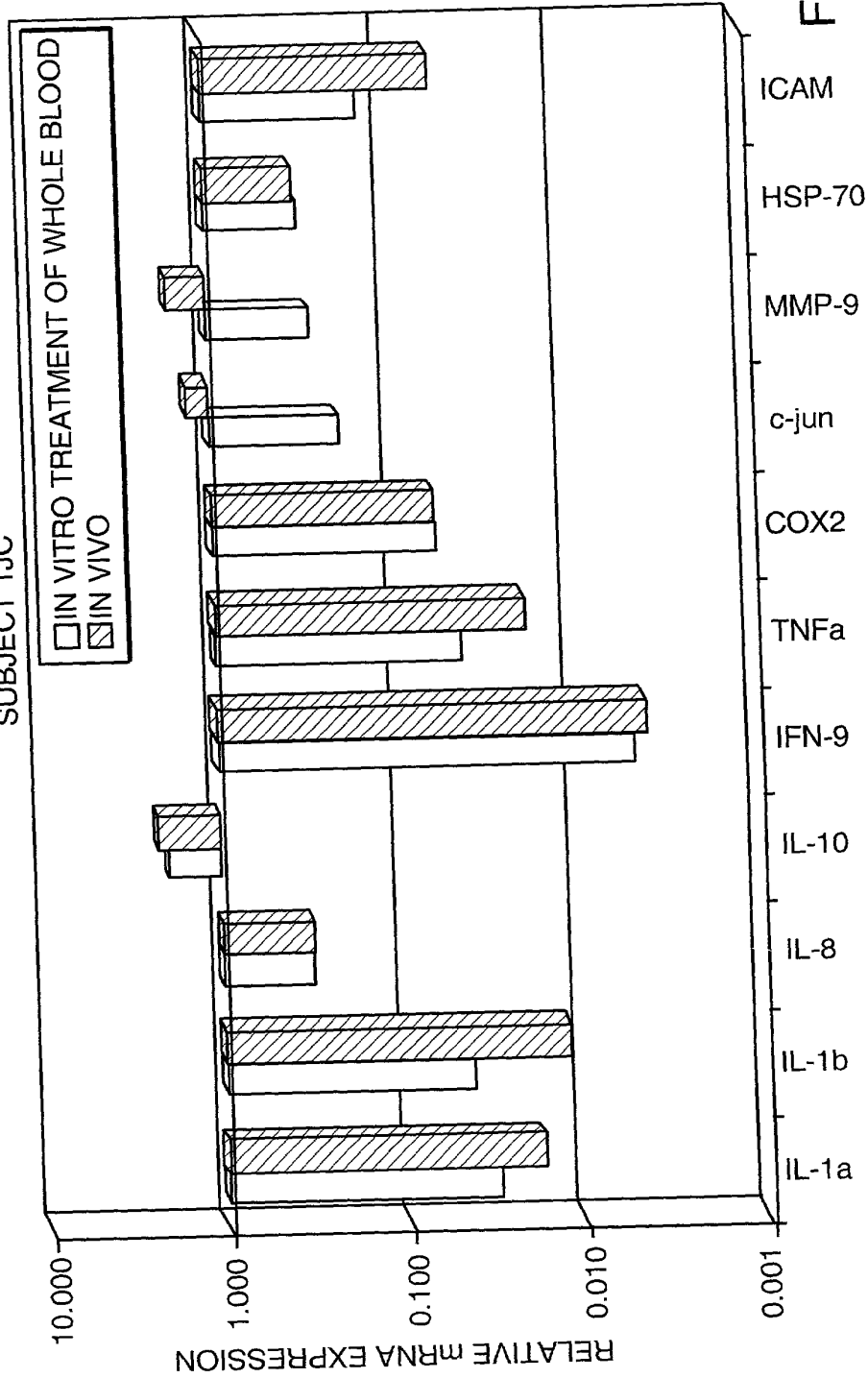
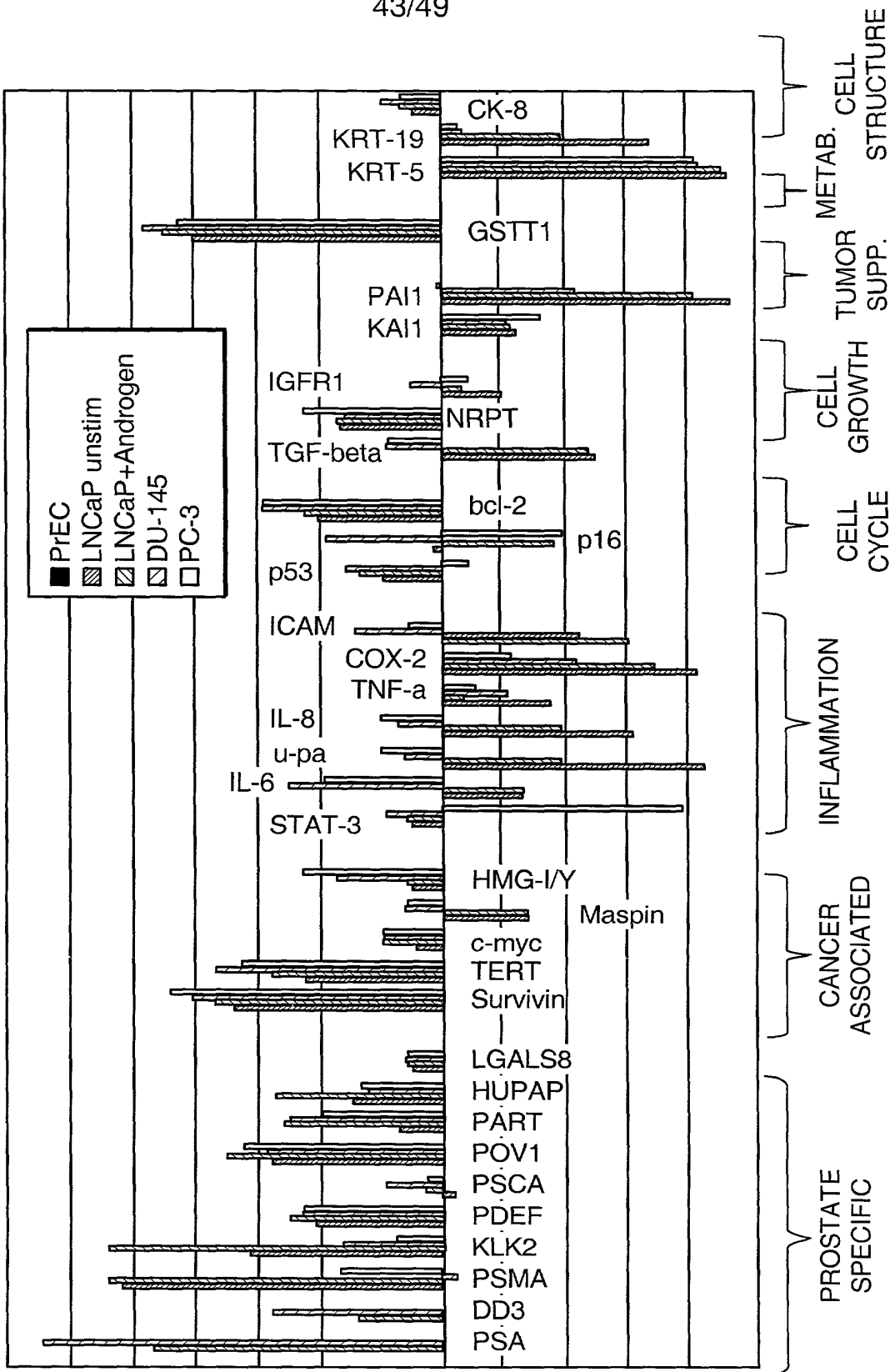


FIG. 29b

FIG. 30

EFFECT OF DIFFERENT AGENTS EVALUATED USING A SUBSET OF THE PRECISION  
PROSTATE PANEL, AND SHOWING BROAD FUNCTIONS OF PANEL CONSTITUENTS



EFFECT OF THE PHARMACEUTICAL CLOFIBRATE AS MEASURED ON RAT LIVER METABOLISM PRECISION PANEL

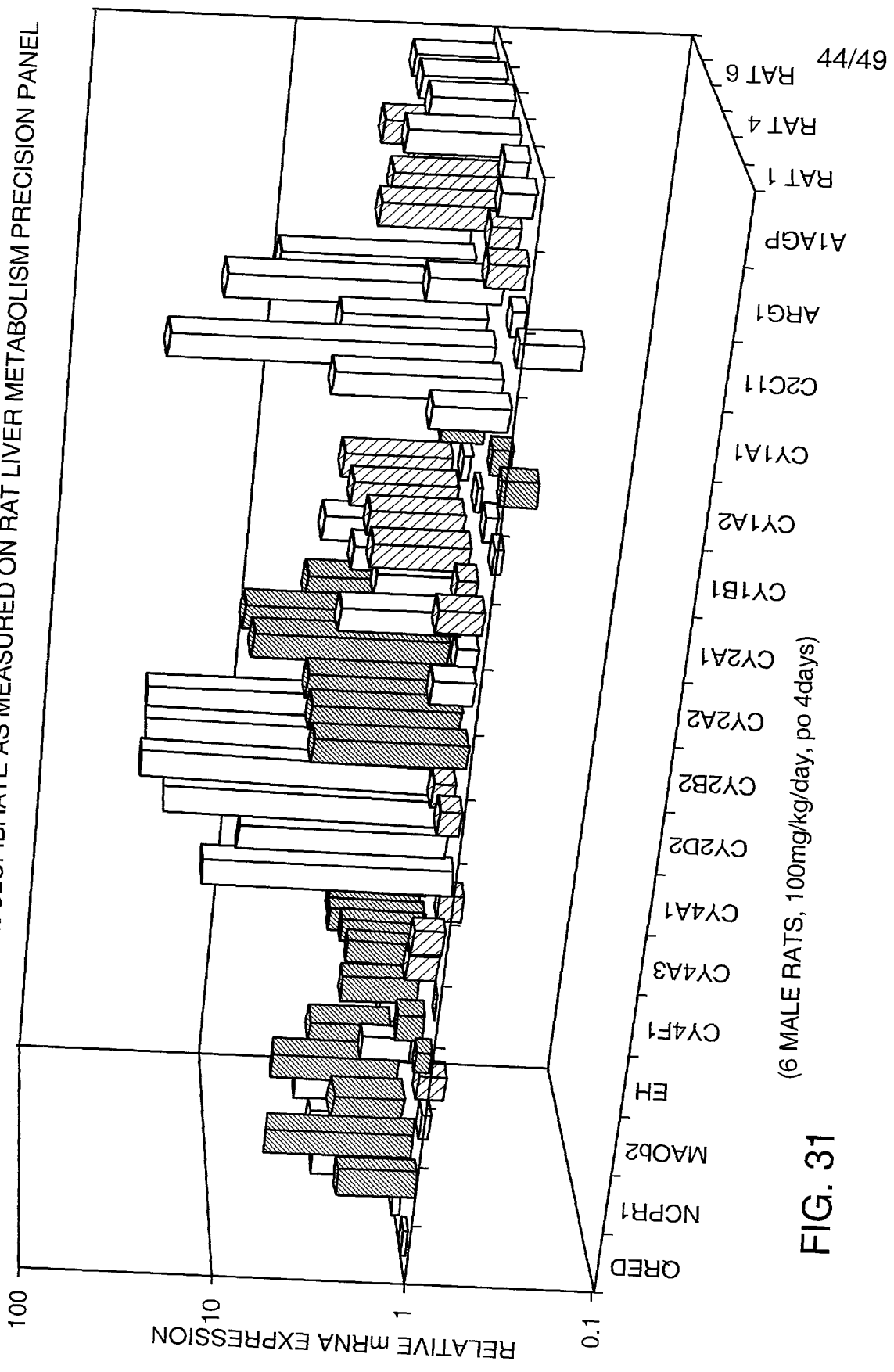


FIG. 31

A METABOLISM PRECISION PANEL DIFFERENTIATES DRUG RESPONSES IN RATS.

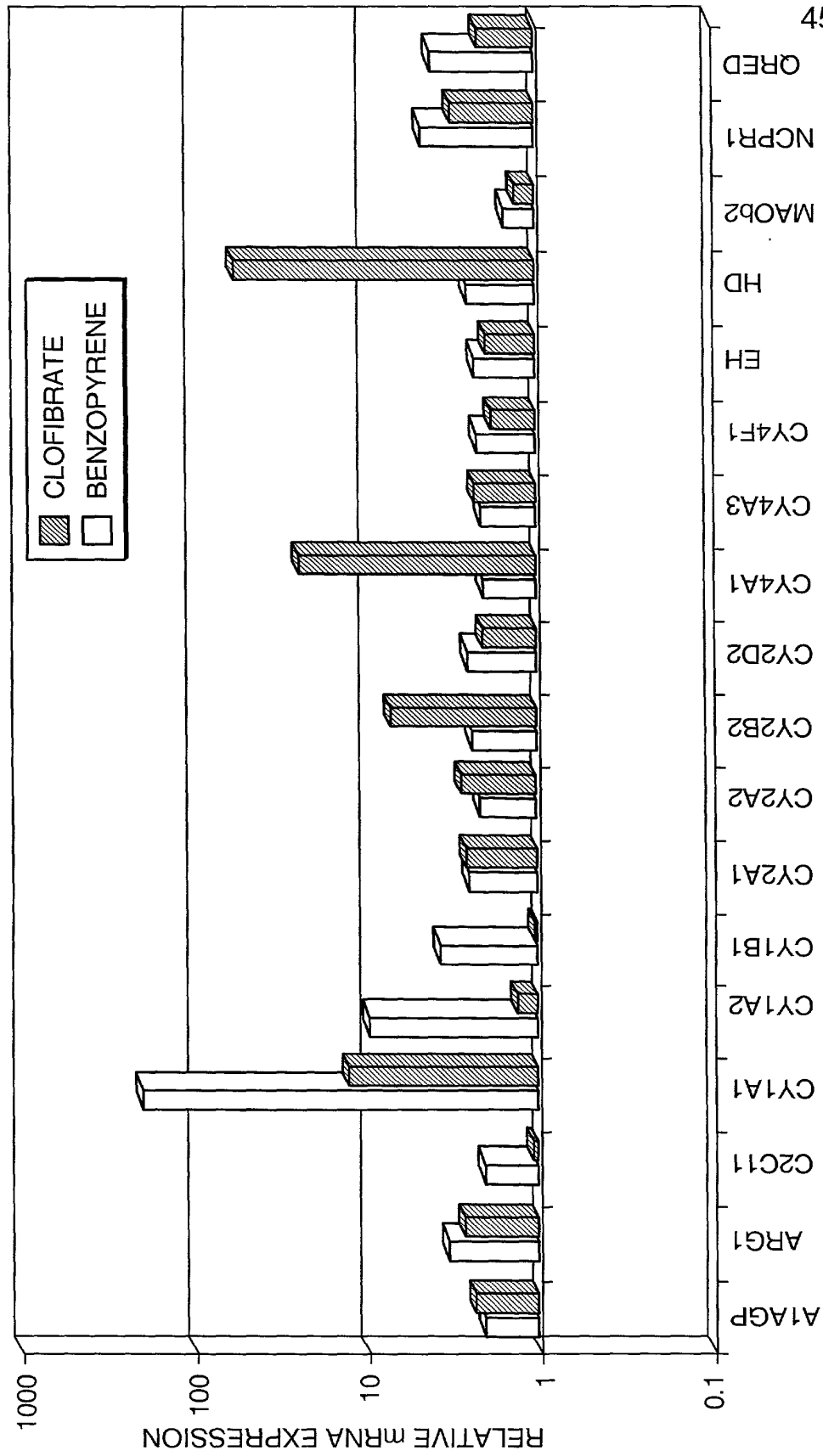
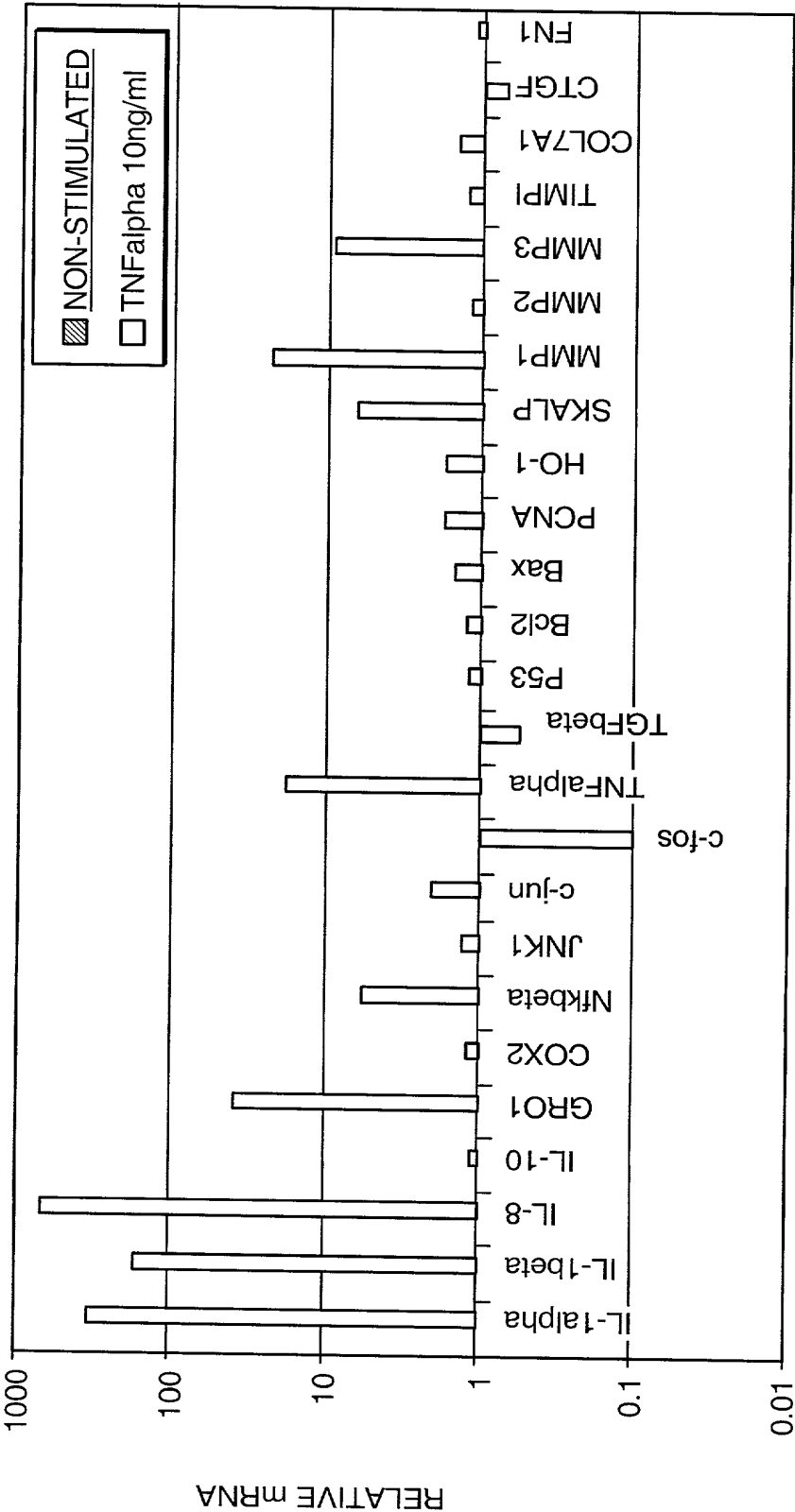


FIG. 32

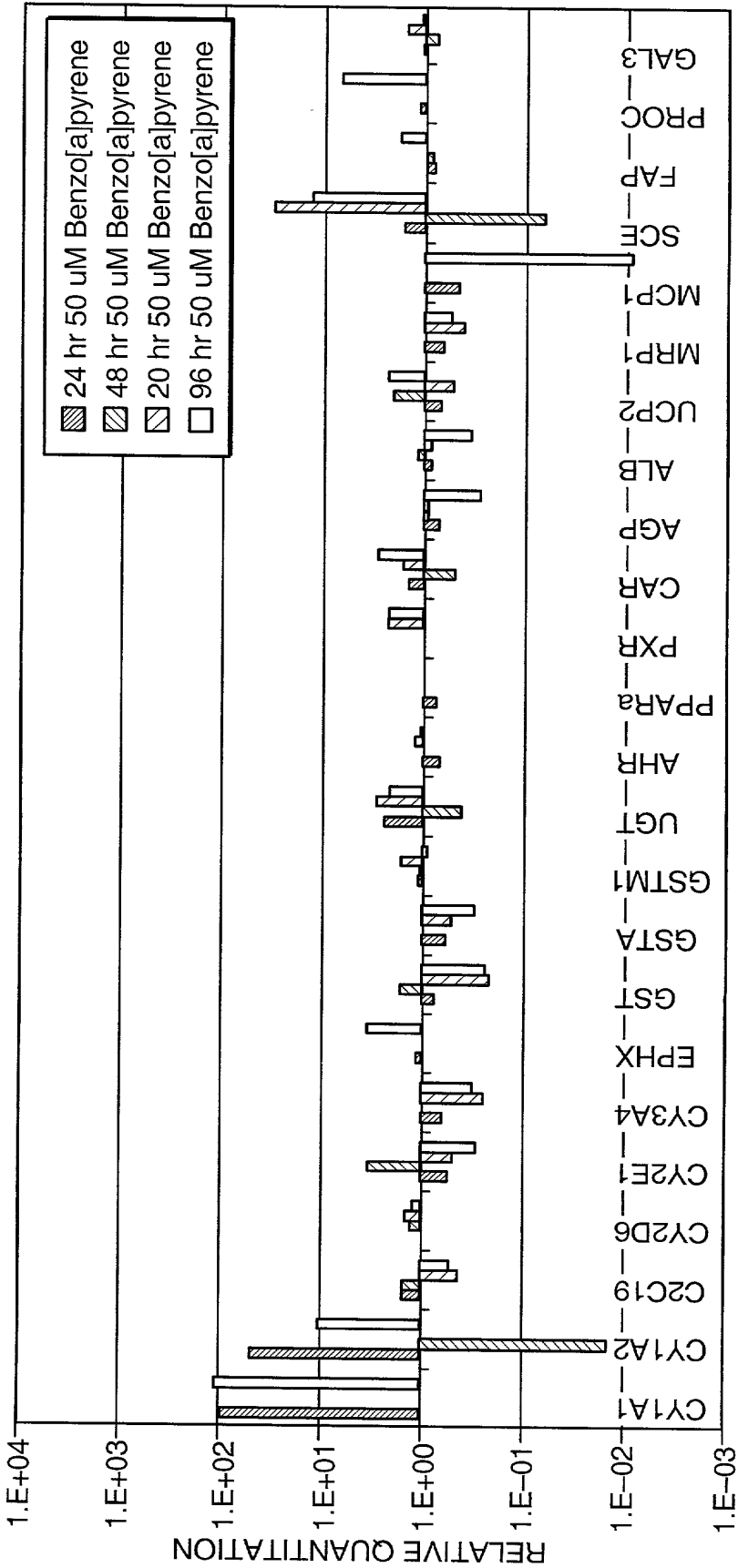
A COMBINATION OF THE SKIN/EPITHELIAL AND VASCULAR PRECISION PANELS SHOW THE EFFECT OF ADMINISTRATION OF A STIMULANT.



SKIN PANEL GENES

FIG. 33

EXAMPLE USE OF THE HUMAN LIVER PRECISION PANEL



Loci

FIG. 34

HUMAN UMBILICAL VEIN CELLS TREATED WITH TNF ALPHA AND ASSAYED ON THE VASCULAR PRECISION PANEL  
HUVEC STIMULATED WITH TNF- $\alpha$ , t = 24hr

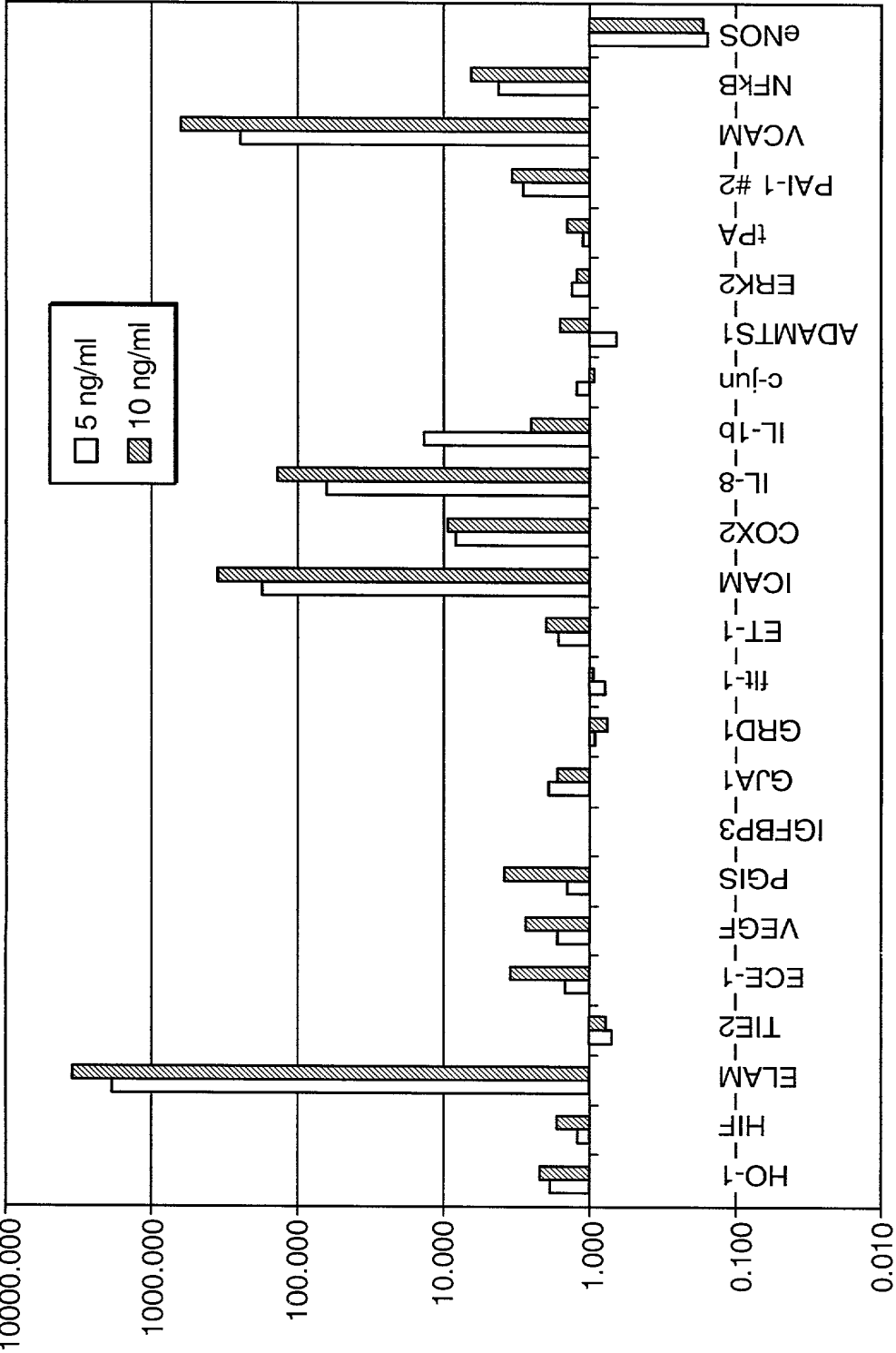


FIG. 35



ASSAY OF STIMULATED, HUMAN KERATINOCYTES ON THE SKIN PRECISION PANEL

EFFECTS OF N-ACETYLCYSTEINE ON UVB-STIMULATED KERATINOCYTES

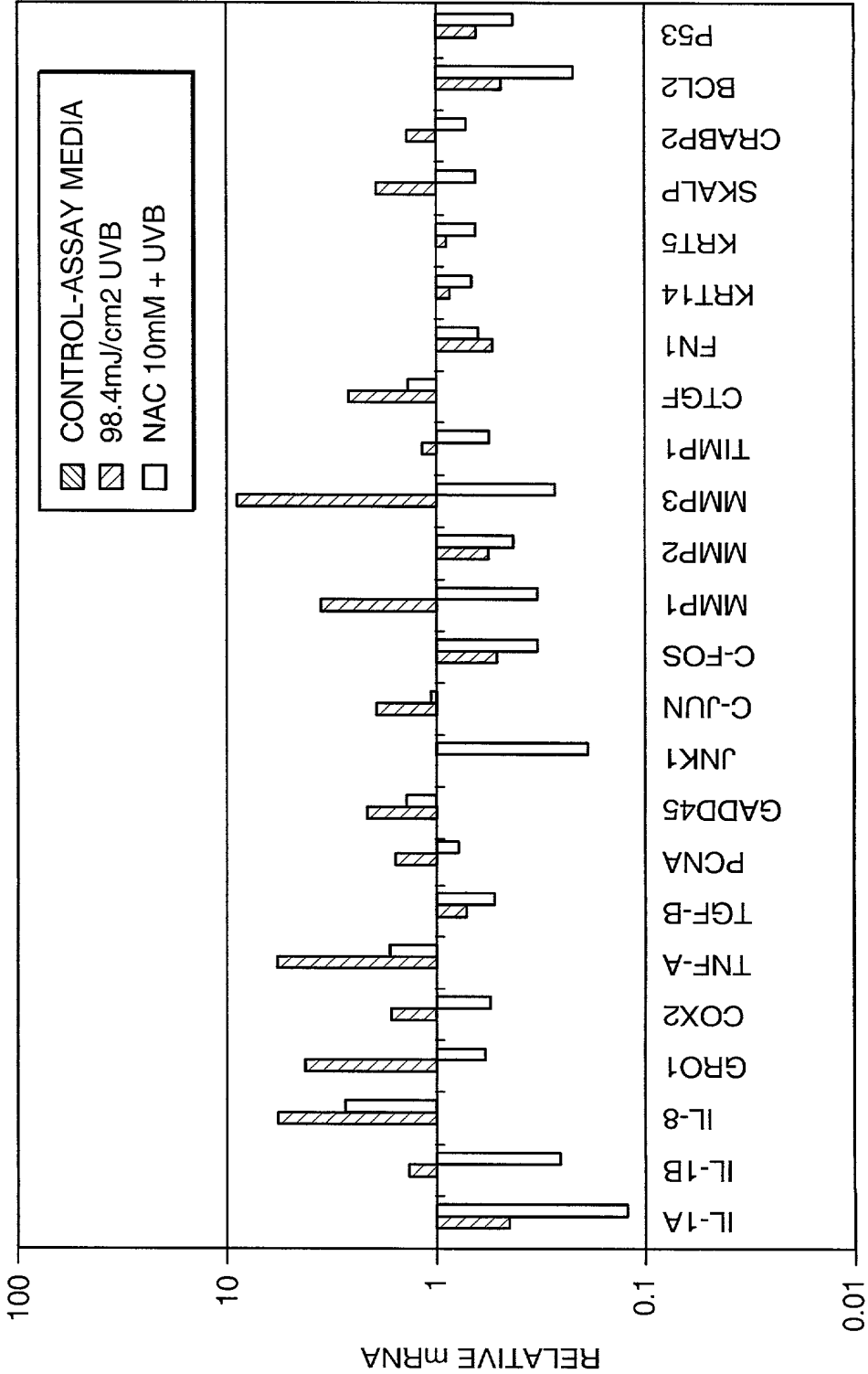


FIG. 36